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JAUNDICE—A METHOD OF DECIDING WHERE SURGICAL TREATMENT SHOULD SUPPLEMENT MEDICAL CARE

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THIS report catalogues the results of an attempt to find better methods of selecting the cases of extrahepatic regurgitational jaundice that should have the benefit of supplemental surgery; conversely, to spare the numerous individuals with intrahepatic jaundice (hepatitis or hepatosis) from additional trauma, the result of the surgery and associated anesthesia. Medical and dietary regimens are now available which greatly expedite the liver's natural tendency to recovery from all varieties of insult except malignant invasion. Surgeons have greatly profited thereby in terms of pre- and postoperative medical care of these patients. It is apparent, furthermore, from current reports* that surgeons must now master the newer techniques of partial or complete pancreatectomy (chiefly for cancer of the head of the pancreas or ampulla of Vater). Exploration simply to establish the diagnosis, without any attempt to restore bile flow to the intestines, has very little to recommend it. Furthermore, it is not enough to know, in the presence of jaundice, that there is demonstrable disease (Graham-Cole¹ positivity) within the gall bladder or even the common duct. We are prepared to show that some such are casual concomitants; and closer inspection of the diagnostic patterns or profiles available after a grouping of the blood, urine and stool tests we are

outlining would have ruled against surgical interference at that particular time.

Circulation of Bilirubin and Watson's Great Diagnostic Contribution

Tests of liver function have been as numerous as knowledge develops concerning the purposeful metabolic processes in which that organ is shown to have a part; each proven liver cell adaptation (and there are many) proffers another test of liver cell capacity. A good example is the recommendation of Lord and Andrus² made soon after the discovery of vitamin K. They proposed that the prothrombin response to vitamin K, after oral or parenteral administration, offered "a key test" of liver efficiency. That appears to be the routine method whereby most liver tests have been developed. Lichtman³, to whom we shall frequently refer, in Chapter VIII of his book devotes Pages 249 and 343 to a description, analysis and evaluation of over fifty individual tests, and at the end of the chapter adds 312 references. Considerable sympathy, but not support, may therefore be extended to the competent surgeon who has been heard to exclaim, "The icterus index is the only understandable measurement I need." It must be agreed by everyone that it rapidly became a great and simple screen with which to measure the degree and rise or fall of bilirubinemia. The bromsulphalein dye test (the prototype of the phenolsulphonphthalein test of the urine for kidney function), recognized as an excellent test in

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*Those interested in the surgical techniques should read the articles by Allen O. Whipple^{12,13}, of New York, and Clarence Dennis¹⁴, of the University of Minnesota. O. T. Clagett¹⁵, of the Mayo Clinic, has several successful partial or complete pancreatectomies to his credit.

liver disease without jaundice, obviously technically is of little value in the field of this discussion.

However, after Watson^{9,10} reported his studies on pigment metabolism the jaundice puzzle lost much of its terror and confusion. Unfortunately, hospital staff men and clinical laboratories have been very slow in coming to an understanding of Watson's fundamental approach with exact methods of finding out where a block arises in a natural transmission of bilirubin from the extrahepatic breakdown of red cells by the reticulo-endothelial cells, through to the exit of bile via the common duct into the duodenum. Then he proceeded to demonstrate the capacity of the liver to reabsorb or accept some portion of the urobilinogen arising from the breakdown of bilirubin in the intestines; and if the liver cells are not able to do so their degree of dysfunction is reflected in the amount of urobilinogen appearing in the urine. The collection of a twenty-four-hour specimen of urine to get the quantitative output of urobilinogen has been easily accomplished; but Watson's original collection of the stools over a four-day period, in order to get a suitable average, posed a difficulty which seemed too time-consuming to the surgeon (now having vitamin K to counteract the usual danger of hemorrhage), and between the nurse and the patient, all too frequently, stools got to the sewer instead of to the laboratory. As a result, for nearly ten years a consistent laboratory study of jaundice patients languished in a desultory use of Watson's most helpful quantitative stool and urine estimations. Recently, this method has been changed and modified both by Watson and by others. Steigman and Dyneiwicz⁸ have recently given complete support to the conclusions drawn by Watson; and they have simplified the stool assembly by working with exactly weighed specimens of stool and estimating the urobilinogen quantitatively in terms of 100 grams of stool. Recently, Watson¹¹ has used a similar simplification and somewhat altered the laboratory technique, but it has made no change in the extreme validity of the procedure. He refers to these smaller samples often taken for recheck, as "random stools."

This lag of approximately ten years after Watson's first report is stressed because it is certain that other observers have fared no better than one of the authors (E.L.T.) who, for this intervening period of years found that each occasion where the method was desirable and asked for, St. Mary's Hospital clinical laboratory personnel had perforce

TABLE I. JAUNDICE CASES—ONE-YEAR STUDY*

St. Mary's Hospital, Duluth, Minnesota

Types	Number
Hepatitis (osis)	
(a) Chemical	1
(b) Catarrhal jaundice	30
(c) Infectious (biliary)	1
(d) Cirrhosis of liver	1
Cholecystitis	4
Cholelithiasis	
(a) Gall bladder	4
(b) Common duct	4
Carcinoma	
(a) Ampulla of Vater	1
(b) Liver ducts	1
(c) Gall bladder	2
(d) Head of pancreas	4
(e) Liver metastasis	1
Mechanical (postoperative)	2
Total	56

*From that assortment, ten illustrative cases are chosen for comparative summaries of the chosen laboratory tests.

to redevelop its interest, reorganize its solutions and technique, only to lose interest later with new groups of interns and laboratory technicians. This study and plan was an outgrowth of the intensive effort of one of the authors (J.J.F.), a former student of Dr. Watson's who, first as an intern and later as a resident, instilled into the clinical laboratory and its staff an enthusiasm and interest which culminated in this review for the year 1944. It has worked out admirably; and when the laboratory technicians are made a part of the consulting team and made to feel that the multiple tests asked for are not whimsical endurance mazes, they promptly share the clinician's enthusiasm over the inspiring diagnostic accuracy that results. These results have been tested three ways: the natural procedure to recovery of all the cases listed under "infectious hepatitis"; the discovery of stone in the common duct where it was surmised; the finding of cancer, either in the head of the pancreas or in the ampulla of Vater, determined either at operation or at autopsy, or both.

Material Studied: Additional Tests Chosen

Fortunately, the year 1944 had a minor epidemic of so-called "infectious jaundice" in the Duluth vicinity. Table I lists the fifty-six cases; thirty-two that are thus loosely subdivided, with one other definitely traced to drugs. While these patients were in the hospital there was a fortunate concurrence of nine cancer cases, as shown in the charts, and eight in which the site of stone was found equally as between the gall bladder and the common duct. The other laboratory tests or checks decided upon were selected from those favorably mentioned in the current literature, and admirably

discussed and assembled in Lichtman's book. He has this to say in his introductory remarks opening Chapter VIII on liver function tests and the search for "an all-encompassing miracle test" that would suffice to differentiate all jaundice. He writes, "The van den Bergh reaction promised at first to fulfill this demand. An intimate knowledge of the manifold functions of the liver, however, precludes the realization of this dream." He adds that multiple tests in different phases of the disease will lead to satisfactory appraisals. Those interested should read this chapter; it is full of interest and common sense. For example, it is now necessary to bring into our routine diagnostic consciousness an interpretation of the van den Bergh test, including quantitative estimates of that portion remaining in the blood which has not been acted upon by the liver cells (the hemobilirubin); and that portion which has passed through the liver, undergoing some structural change, and is then reabsorbed into the blood from the liver ductal system (the cholebilirubin). These have been known previously as "the indirect and direct van den Bergh." The newer classification is much better and properly orients the procedures. We have, therefore, included the quantitative estimation in the blood of the hemobilirubin and the cholebilirubin. It must be understood that this test is of particular value in hemolytic jaundice (acholuric), but we are not including that issue in this discussion. A better understanding of the meaning of the level of the quantitative bilirubin will result from careful analysis of the case reports which follow.

There seems in the literature also to be considerable evidence that blood determinations of the blood cholesterol and of the alkaline phosphatase, measured in King-Armstrong units, offer a distinct help in differentiating intrahepatic from extrahepatic biliary obstruction. Roberts⁷ suggested the study of plasma levels of the enzyme phosphatase[†] as another indication or aid in separating obstructive from infectious jaundice. There is also conclusive evidence that in severe liver damage there is a distinct drop in that portion of the cholesterol known as "cholesterol esters." While we have not been able to provide in Table II all these determinations in every case, we feel that the composite profile, rather than any individual reading, is what counts. It is not always pos-

sible to include every test. Quick's⁶ test for determining the ability of the liver to synthesize hippuric acid from benzoic acid has stood up against all critics. Unlike the estimation of the cholesterol esters it presents few technical difficulties. Benzoic acid can be introduced intravenously if the patient is vomiting. Hanger's flocculation test³ has one great factor of simplicity: where negative it lends assurance of a normal liver.

From this point on we ask the reader to be patient in reading the abbreviated histories of ten cases as outlined in Table II. Where interns, quite unfamiliar with the background of Watson's studies and tests, have sat down in front of these profiles and patterns, and have been told the purpose of this collective study and checking, they have invariably made the right deduction and diagnosis.

Résumé of Ten Cases

Case 1.—A white woman, aged thirty-five, gave a history of taking tablets (cinchophen), followed by jaundice. Referring to Table II (as in all these cases) note first the high icterus index, which dropped from 79 units to 27.2 in a three-day period. Next notice that the cholebilirubin was much less than 75 per cent of the total bilirubin in the blood, which is the usual circumstance where the obstruction is extrahepatic. While the studies on urobilinogen were incomplete, note that the two levels found in the twenty-four-hour urine, three days apart, and the one reading on the feces output for twenty-four hours, were of the amount found in total obstruction, as in cancer. Note, however, that the alkaline phosphatase was within normal limits, and both the Hanger and the hippuric acid values denoted diffuse liver disease. We were certain, therefore, that the diagnosis was toxic (retentional) jaundice. She was treated on that basis, and recovered promptly on a high carbohydrate, high protein, low fat, high vitamin diet, reinforced with powdered skim milk and brewer's yeast.

Case 2.—A white man, aged fifty, gave a history of painless jaundice which began four weeks previous to admission to the hospital. Notice here that the icterus index was 98, and the great preponderance (over 75 per cent) of cholebilirubin over hemobilirubin, meaning that bile had passed through the liver cells and was being reabsorbed from obstruction lower down. Note further from the table that whereas the blood cholesterol and cholesterol esters were undisturbed the alkaline phosphatase was very decisively elevated from the normal level of 4 to 14, to 47.1 King-Armstrong units. Furthermore, in keeping with the relatively intact liver was the negative Hanger test and very slight diminution in hippuric acid synthesis. Therefore, our diagnosis was cancer of the head of the pancreas. This was found at operation, and a cholecystoduodenostomy was performed. This gave him six months of reasonable comfort. At autopsy primary cancer of the head of the pancreas,

[†]It seems just as well to evade concern over the biochemical background of these serum changes. These checks are only medical weather vanes, and share with the Wassermann tests peculiar and intricate variations in tissue fluids and the blood serum.

TABLE II. TESTS FOR JAUNDICE DIFFERENTIATION

	Case #1 F. Age 35 Toxic Jaundice	Case #2 M. Age 34 Ca. Head of Pancreas	Case #3 F. Age 7 Catarrhal Jaundice	Case #4 F. Age 74 Stone in Common Duct—2 yrs.	Case #5 F. Age 61 Common Duct Stone	Case #6 M. Age 68 Ca. of Pancreas	Case #7 F. Age 80 Liver Damage Not Ca.	Case #8 F. Age 50 Intermittent Jaundice Ca. Ampulla	Case #9 Pregnancy With Hepatitis	Case #10 Cholelithiasis and Hepatitis
Icterus Index 10 units	73 U *27.2 U	98 U	33.3 U	16.0 U	58.0 U	72.70 U 120.0 U	108 U 111 U 77 U 37 U	8.3 U 75	24.4	38
Cholebilirubin 0 Mg. %	7.3 0.	3.6 11.1	4.80	3.1	7.60	10.4 10.9	11.1		2.0	5.8
Hemobilirubin	4.2 .25	1.7 .8	.60	.20	.96	0.93 1.0	1.09		0.4	0.45
Urine Urobilinogen less than 3 mg./ 24 hrs.	0.6 1.17	0.0 0.0	0.00 0.99	4.0	4.50	.36 .29	11.08	0 1.1	0.40	1.08
Feces Urobilinogen 30-180 mg./100 gms.	0 .15	0.0 0.0	0.00 48.0	52.0	75.0	0.00 0.7	49.8	2.03 2.31	51.4	150
Total Cholesterol 150-200 mg. %	—	143	274	308	253.0	277	—	85	165	152
Cholesterol Esters 50% of total	—	80	231	57	—	—	—	35	—	—
Alkaline Phosphatase 4 to 14 units King Armstrong	10.6	47.1	16.9	59	26	123	17.9	58.2	11.3	31.1
Hangers 0	4+	Neg.	2+	Neg.	Neg.	Neg.	4+	Neg.	4+	4+
Hippuric Acid 3 gms. excreted in 4 hrs.	0.6	2.29	—	1.90	3.75	2.98	1.02	—	1.18	2.3

*Where double entries are scheduled the second represents a 3-or 4-day, later interval.

—Indicates test not done.

JAUNDICE—FEE AND TUOHY

with extensive liver metastasis, was proven. We have no hint as to why the cholesterol levels are not disturbed. This strongly attests the value of "multiple checks."

Case 3.—A white girl, aged seven, had a three-day history of nausea and vomiting, which was followed by a gradually increasing jaundice. The icterus index gave 33.3 units, a cholebilirubin again over 75 per cent of the total bilirubin in the blood. Note again the extremely low levels in the first twenty-four-hour check of the urine and stool urobilinogen, and a very prompt elevation of the latter when the test was repeated five days later. This illustrates one of the objections that was brought against Watson's technique of quantitative studies in the earlier years. It was found then, and we know now, that in the early stages of acute catarrhal jaundice (hepatitis) the urobilinogen levels, urine and stool, are as low as found in cancerous obstruction. In contrast to cancerous obstruction, however, the levels do not remain depressed very long; the liver soon re-establishes function except, probably, in those instances of extreme damage, as in fatal acute yellow atrophy. The total cholesterol and cholesterol esters are elevated, as in extrahepatic obstruction, but the alkaline phosphatase remains approximately normal. In this instance the hippuric acid test of Quick was not performed, and the Hanger showed only two plus. This child was one of a considerable number of cases of hepatitis or "acute catarrhal jaundice" occurring in this community at the time of this study. All these patients have received practically the same dietetic regimen, so that that factor has been well controlled. We have had no fatalities nor severe sequelae in this group of acute hepatitis.

Case 4.—A white woman, aged seventy-four, came with a two-year history of jaundice. We grant that the history was extremely suggestive of the diagnosis ultimately made of stone in the common duct. However, she was in the cancer age and had the appearance of having a malignancy. In any case, the length of time that she was sick and the moderate elevation in the icterus index (16 units) connoted the probability of incomplete obstruction to the flow of bile. Note the cholebilirubin again heavily preponderating over the hemobilirubin; the total urine urobilinogen in twenty-four hours only slightly more than normal, but the stool at 52 mg. per cent, much too high for cancer. Then appears the total cholesterol decidedly elevated and the cholesterol esters definitely less than 50 per cent, thereby speaking for considerable liver damage. In keeping therewith is the considerable reduction in the hippuric acid synthesis from the normal level of 3 grams to 1.9. For some unknown reason the Hanger test registered entirely negative. The sum total of evidence here pointed to stone in the common duct (stones were visualized in the gall bladder by the Graham-Cole test). Considerable fibrosis and scarring of the liver was surmised. That is exactly what was found at operation. She was given adequate pre-operative and postoperative preparation on a modification of Patek's diet, and she made an excellent recovery.

Case 5.—This, briefly excerpted, is that of a white woman, aged sixty-one, with a history of eleven years

of repeated attacks of cholecystitis, with recurring bouts of jaundice, accompanied by extreme wasting and marked itching of the skin. The reader will notice that the laboratory test profile is essentially the same as for the previous case except for the absence of liver damage, as indicated by a quite normal hippuric acid synthesis (3.7 grams), but with about the same totals of urine and stool urobilinogen as in the previous case. The alkaline phosphatase was not so markedly elevated. At operation a large stone was found in the common duct. The liver was quite normal, and she made an uneventful recovery.

Case 6.—This man, aged sixty-eight, gave a history of only three weeks of painless but rapidly developing jaundice. Note how closely in this case of equally proven cancer of the head of the pancreas the laboratory record resembles the profile of Case 2. In the first place, in contrast to simple catarrhal jaundice, toxic in nature, as in Case 1, the icterus index mounted from 72 to 120 units within a matter of four days. Observe again how the cholebilirubin greatly preponderated over the hemobilirubin, and the urine and stool studies for twenty-four-hour specimens remained fixed during the entire period of study, remaining at the very characteristic level of cancerous obstruction. There were also the characteristic elevation in cholesterol to 277 milligrams per cent; the cholesterol esters were not estimated. Observe that the alkaline phosphatase was very decisively elevated, and in our experience it would seem to mount to these high levels in situations where the icterus index rapidly advances and the course of the disease is short. The Hanger and the hippuric acid would both connote a relatively normal liver. All these surmises were established at operation.

Such instances as this indicate that if and when we can make early enough diagnoses of cancer of the head of the pancreas and surgeons have adequately built up their technique, capably supported by proper anesthesia, satisfactory pre-operative preparation and post-operative followup, the closely associated organs (liver, stomach and duodenum) will no longer bar the removal of the pancreas in part or whole. In fact, this is already being accomplished by surgeons capable in this field.

Case 7.—This is an instance of a white woman, aged eighty, presenting a six months' history of gradually increasing jaundice. Surgical exploration was vetoed only after considerable argument and close reference to the laboratory profile exhibiting rather decisive liver damage. In the first place, note that in a succession of estimates of the icterus index the unitage dropped from 108 to 37 within a period of observation of about ten days. The cholebilirubin remained at the level of great excess over the hemo, indicating extrahepatic obstruction, or possibly at a "pericholangitic" level. The urine urobilinogen, however, at 11.08 begins to throw the evidence toward diffuse liver damage, whereas the stool urobilinogen at 49.8 milligrams per cent is too high for cancer either in the pancreas or in the ampulla of Vater. Cholesterol studies were not made but the alkaline phosphatase, at 17.9 King-Armstrong units, did not support the surgeon's contention that he should explore with the expectation of finding stones. The Hanger test came

to the rescue, however, with four plus positivity, and the hippuric acid synthesis was down to about one-third of normal.

While we were in the throes of studying this situation pro and con the kindly octogenarian improved rapidly without operation and is now quite well. She thinks our studies were well worth while. We were not able to rule out the possibility of cholecystitis in her background, but even if she had it her age alone should rule out other than emergency surgery.

Case 8.—This white woman, aged fifty, well illustrates the diagnostic difficulties involved in recognizing cancer in the ampulla of Vater. She had had somewhat vacillating attacks of jaundice for a period of six weeks. Surgical exploration for common duct stone was first carried out in the early months of 1943. The surgeon reported that he found nothing indicative of pancreatic invasion but "the common duct was full of goo." He was able to probe down into the duodenum, the gall bladder was removed and the duct drained. She improved for about three months. Then followed a period of extreme nervousness and a diffuse distress, seen not infrequently with cancer of the body of the pancreas unaccompanied by jaundice. Three months later, however, she had very definite jaundice, and eight months after the first operation re-exploration was decided upon. This time the liver was studded with metastases, and it was reported that "the head of the pancreas seemed a little hard." It is unfortunate that a complete autopsy was refused.

When one restudies the results of our tests in this instance (and many tests were made which are not here catalogued) it is now obvious that our first diagnosis of cancer was correct. Observe that during the period of observation the icterus index mounted from 8.3 to 75 units in one week's time. Unfortunately, the cholebilirubin and hemobilirubin were not estimated, chiefly due to the surgeon's zeal to have action. Observe that the urine and fecal urobilinogen quantitative totals remained at the cancer level. For some reason, for which we are not able to provide a satisfactory answer, the cholesterol and cholesterol ester levels were low, at 85 and 35 milligrams per cent respectively. Nevertheless, the alkaline phosphatase denoted extrahepatic obstruction. In this instance the Hanger test was negative and the hippuric acid synthesis was not recorded.

One further test was extremely helpful and we think it had meaning: on a meat-free diet this patient, during the period of study previous to her first operation and again previous to her re-exploration, *showed repeated positive tests for blood in the stool*. This evidence we think summates most logically to establish the presumptive diagnosis of carcinoma of the ampulla of Vater.

Cases 9 and 10: Both patients are middle-aged white women. They came into St. Mary's Hospital at a time when the cases of "infectious hepatitis" mentioned previously were appearing quite regularly. The woman in Case 9 was pregnant at the fourth month, and later on bore a premature infant with the erythroblastosis foetalis syndrome, with some Rh factor associated. We presumed the surgeon was led to perform surgical exploration, including drainage of the common duct, by the

nature and degree of the colicky attacks. We were unsuccessful in pleading the cause of conservation. As a matter of fact, the surgeon didn't wait until all the tests were completed!

Reviewing the tests, we draw attention to the level of .040 urobilinogen in the twenty-four-hour stool, as speaking very definitely against extrahepatic obstruction. The total blood cholesterol at 165 milligrams per cent and the alkaline phosphatase at 11.3 King-Armstrong units pointed in the same direction. Conversely, the four-plus-positive Hanger and the reduction of the hippuric acid synthesis to 1.18 grams should have been evidence enough that this patient had a good chance for recovery with proper medical and dietary care, without submitting her to the trauma of introducing a drain into the common duct, with all the other possible liver depressants incidental to the anesthetic.

Case 10.—This white woman, aged forty-five, is included in this list because she had obliging evidence of gallstones, as shown by the Graham-Cole roentgen films. Observe, however, the doubling of the alkaline phosphatase from a high normal of 14 units to 31.1 units as the only evidence furnished of extrahepatic obstruction; and she had the four-plus Hanger positive test, although the hippuric acid was not much reduced from the normal. Some critics may claim that the presence of gallstones alone is sufficient evidence of cholecystitis and that cholecystitis is a sufficient source for hepatitis. However, in this instance the pathologist searched this gall bladder carefully and found no evidence of inflammation whatever. We have the subtle feeling that despite the presence of stones in the gall bladder this woman had infectious hepatitis of unknown origin.

Conclusion

In conclusion, these headings comprise what we have hoped to accomplish: to urge the closest co-operation between clinicians and the clinical laboratories in the diagnostic problems submitted by jaundiced patients.

1. Diffuse hepatitis, whether due to some hepatic toxin (cinchophen or arsphenamines or such), or due to some acute infectious process (viral in nature), is a medical disorder. A low fat and a very high protein diet and circumspection cure most of these patients. Frequently, such patients have had needless operations performed in many hospitals.

2. When it is proven that the jaundice is primarily extrahepatic, not only should the diagnosis be made with certainty, but the surgeon in performing exploration should know what he is expected to do.

(a) Carcinoma of the head of the pancreas, carcinoma of the ducts, including the ampulla of

(Continued on Page 1001)

CYSTECTOMY FOR CARCINOMA OF THE BLADDER

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CARCINOMA of the bladder has presented to the urologist one of his most discouraging problems. At the meeting of the American Urological Association in 1939, Orr, Carson and Novak reported "a statistical study of present-day methods used in the treatment of tumors of the bladder." Some of the findings and statements regarding cystectomy are very discouraging.* While some fourteen surgeons favored the use of cystectomy more often in carefully selected cases, only eight of the 267 reporting surgeons gave cystectomy as the procedure "giving the longest life with the greatest degree of comfort to the patient."

As is commonly felt regarding malignancy in general, I feel that the cure of carcinoma of the bladder is accomplished only by complete destruction or removal of the growth. Results of radiation therapy, hailed with such hope and promise, have not been satisfactory in the experience of most men. Transurethral resection and fulguration will cure many localized papillary tumors of low grade malignancy, though multiple and more extensive growths of that nature may be found beyond practicable reach by such means. Infiltrating growths, especially of higher grade malignancy, are often incurable by any of the means now available. Segmental resection of the bladder wall will cure some of those infiltrating growths located outside the trigone. Cystectomy will cure some of them if used early, and should cure many of the less malignant papillary tumors which are too extensive for cure by less radical surgery.

At first glance, cystectomy should be a practicable and logical means for cure of carcinoma of the bladder, since the bladder is not a really essential organ, and since it has been generally felt that metastasis occurs so late that death is more often due to ureteral obstruction and consequent renal infection. However, the bladder is relatively inaccessible, diversion of the urinary flow has been a difficult problem, and the lymphatic drainage area is not simple or easily removed.

Because of these difficulties and the consequent poor results, cystectomy long ago fell into disrepute. In recent years, improvements in pre-operative and postoperative treatment and in the technique of ureteral transplantation, have revived interest in the operation. However, surgeons, even of wide experience, still disagree sharply as to whether or not the operation is at all justifiable.

Diversion of the urinary stream by transplantation of the ureters has been one of the greatest obstacles, if not the greatest, in the use of cystectomy. Here we have again a sharp disagreement among surgeons. Most urologists advise transplantation to the colon whenever possible, but some advocate transplantation to the skin, either as a preliminary step or as one part of the operation itself. Huggins of Chicago has even advocated transplantation of one ureter to the skin, and simple ligation of the other ureter at the time of cystectomy. Transplantation of the ureters to the skin is certainly simpler and carries less immediate risk than transplantation to the bowel, but the care of the stumps and the collection of urine have added to the discomfort and unhappiness of the patients. Prevention of strictures and of cellulitis at the cutaneous openings of the ureters has sometimes been difficult. Transplantation of the ureters to the bowel became practicable after development of the so-called submucosal principle developed and popularized by Coffey. However, the method still carries an operative mortality of 24 to 50 per cent in the hands of even the most experienced surgeons, and the very real danger of later development of renal infection. Ferguson in 1931 suggested a two-stage transplantation, implanting the intact ureters at the first stage and establishing the opening into the bowel at the second stage. This principle was applied with modifications by Higgins, Winsbury-White, Poth, Brenizer, and Jewett. Although I have not tried this method, it seems to me that it may reduce the risk. Sigmoidal transplantation of a ureter that has become dilated through obstruction of its lower end by the tumor can be carried out successfully, but may not be worthwhile if its kidney has been badly

*Thesis presented before the Minnesota Academy of Medicine, October 10, 1945.

See Table I in the article by Orr, Carson and Novak.

damaged by back pressure and if the other kidney has undergone some compensatory hypertrophy.

There is less divergence of opinion as to the technique of the cystectomy itself, though various methods have been suggested. Years ago part or all of the prostate and vesicles were usually left in place; but it is now recognized that the entire prostate and the vesicles can be more easily removed with the bladder and that thereby the prospect of cure is improved. Some men, apparently with the idea of dividing the lymphatic and the blood supply as early as possible in the operation, have carried the dissection down to the sides and behind the bladder and prostate before dividing the urethra. Others, recognizing the greater ease of dissection and reduced risk to the rectum, have carried the dissection downward to the sides and posteriorly only beyond the superior vesicle arteries, and have then approached the urethra through the prevesical space, clamped the urethra distal to the prostate and used it as a tractor lifting the prostate and seminal vesicles upward and approaching the vasa, ureters, and inferior and middle vessels from below. It seems to me that this latter method is probably preferable. Hinman described a method of combined suprapubic and perineal approach, but it seemed too formidable to me and apparently to most others who have reported cystectomies. Perhaps the dependent drainage which he emphasizes can be as well obtained and with less dissection through a perineal urethrotomy if it is deemed necessary at all.

Pre-operative cleansing and postoperative care of the bowel, including the use of sulfa drugs, has been one of the most important factors in successful sigmoidal transplantation of the ureters and in the preservation of kidney function after the transplantation. I have also occasionally used eserine postoperatively to help maintain ureteral peristalsis as a protection against ascending infection. Careful attention to every detail in the pre-operative and postoperative care, and to every step in the operative technique should bring within reasonable limits the risk of cystectomy with transplantation of the ureters to the bowel.

It would seem to me, then, that the operation of cystectomy can be done with reasonable prospect of postoperative survival and comfort, and that the prospect is becoming steadily brighter through improvements in technique. That prospect will be still brighter if we can impress upon the

public and upon the doctors themselves the importance of prompt and adequate investigation of bladder disturbances and especially of hematuria.

The prospect of ultimate cure is not so bright. One difficulty seems to me thus far completely unsolved and makes cancer of the bladder definitely less curable by surgical removal than is cancer of the breast or cancer of the colon. That difficulty is the complex anatomy, wide distribution, and relationship to other organs of the lymphatics and lymph nodes draining the bladder. It seems thus far entirely impracticable to try to remove the lymphatics and primary lymph nodes at the beginning of the operation of cystectomy, or even at any time during the operation. This at once reduces the cystectomy to a class with simple mastectomy, or simple segmental resection of the colon, with the correspondingly lower incidence of complete cure. Many authors tacitly recognized that difficulty and it has probably been the unappreciated cause of the conviction of most surgeons that cystectomy is never justifiable. Although Conway and Broders used their studies of submucous extension of squamous cell epithelioma of the urinary bladder as an argument that cystectomy offers "more probability of permanent cure than any other method," still a study of their report indicates that the "extension" was frequently also out through the bladder wall, and that metastasis was unrecognized at operation in many cases. The difficulty is further emphasized by analysis of the more recent report of Priestley and Strom of the same clinic. They reported that, of fifty-one patients who survived cystectomy for carcinoma of the bladder, twenty-six had succumbed since operation, and the cause of death was known in twenty. Of these twenty whose cause of death was ascertained, sixteen had died from metastasis and thirteen of these "extension of carcinoma beyond the bladder either to the perivesical tissues or to the regional lymph nodes was noted at the time of operation." Similar extension must have been unrecognized at operation in the other three of that sixteen who died from metastasis. Hinman and others have attempted dividing the bladder attachments before manipulation of the bladder, insofar as possible, but that attempt has not extended to the lymph nodes, the primary filters of cancer cells.

Admitting that the usefulness of cystectomy for malignancy has serious limitations, it seems to me that there are cases wherein it gives some pros-

pect of cure not otherwise obtainable. Of course, before considering the prospect of removal of the tumor, itself, one must consider the prospect of survival of the patient: his general condition, his nutrition, hemoglobin, cardiovascular status and age, as well as the experience, dexterity, and temperament of the surgeon. Tumors amenable to cystectomy include very extensive low grade papillary carcinomas and papillary carcinomas with multiple attachments to the bladder wall, sessile tumors, even of greater malignancy, which, on careful abdominal exploration, are found to be limited to the bladder, and especially those involving the trigone, even if they extend into the prostatic urethra and prostate. However, it is now agreed that tumors found on exploration to have otherwise extended beyond the bladder are not to be treated by cystectomy.

My own experience with the various methods of treatment of cancer of the bladder has been none too encouraging, though there have been some heartening experiences. One patient is alive and well more than sixteen years after suprapubic cystostomy, removal of squamous-celled carcinoma with cautery knife, and actual low heat cautery to the tumor base. Two patients are alive and well six and one-half and four and one-half years after segmental resections of infiltrating papillary cancers, one being of grade III. Several are alive for considerable periods up to eight and one-half years after transurethral resection and fulguration with and without radiation therapy.

Cystectomy for carcinoma of the bladder has been done by me six times. Five patients survived the postoperative period. The ultimate results, while far from perfect, have been interesting and may be termed encouraging or discouraging depending upon one's point of view. Surely all six would have died from the malignancy with less radical treatment. I feel hopeful that two patients are definitely cured of their cancers, though the postoperative periods are too short to be so reported by a statistician (one nearly 4 years and one seven months). Three patients had high grade infiltrating tumors and were treated by cystectomy and transplantation of the ureters to the skin. One I have been unable to trace, and the other two were suffering from recurrences when last seen, one one year and the other over two years after their operations. One patient died after a cystectomy which I would not have performed if

desperation had not got the better of my judgment. He probably should have been allowed to die after palliative treatment without any attempt at cure, but he was a young man who, I thought at the time, deserved a fighting chance. He was admitted with a hemoglobin of 18 per cent which could not be raised farther than to 26 per cent by repeated transfusions. The tumor was an infiltrating one, and we feared that a multiple stage program might give the tumor time to extend beyond the bladder. There was a seventh patient at the General Hospital whose cystectomy was not done because he died of peritonitis after transplantation of one ureter to the bowel.

Case Reports

Case 1.—A woman, forty years old, was admitted to the Minneapolis General Hospital March 17, 1941. She had been treated for tertiary syphilis in 1938 and had been sent to Glen Lake Sanatorium for possible tuberculosis of the kidneys in September, 1940, after the finding of acid-fast bacilli in the urine and urographic deformities suggesting bilateral renal tuberculosis. Further study at the sanatorium had failed to prove the tuberculosis, but biopsy from some hard indurated periurethral tissues was reported as possible squamous cell carcinoma. Examination demonstrated a nodular induration of the urethra with tenderness there and in the inguinal regions and on percussion over the right kidney. Her hemoglobin was 60 per cent, her urine contained many pus cells and occasional erythrocytes and her Wassermann tests were positive. Cystoscopy showed trabeculation of the bladder, reflux up the open ureters, and slight delay in appearance time of indigocarmine. The urethra was sclerotic and pale, but with no fungating or ulcerated growth. The retrograde pyelograms showed bilateral hydronephrosis and hydroureter. Bilateral cutaneous ureterostomy was done extraperitoneally on March 28 and transfusion on April 13, 1941. On April 14 the entire bladder and urethra and the anterior third of the vagina were removed in one piece by a combined suprapubic and perineal approach. The pathologist reported a transitional cell carcinoma invading the muscularis deeply at the bladder outlet. During convalescence there was considerable difficulty with the cutaneous ureterostomies, with at least two attacks of pyelonephritis. She left the hospital in good condition on July 4, wearing rubber cups over the ureters which were functioning well. We have been unable to trace her whereabouts recently.

Case 2.—A woman, forty-eight years old, was admitted to the Minneapolis General Hospital August 19, 1941, complaining of frequency, urgency, dysuria, and hematuria, the hematuria having been present for two months. Examination showed a poorly nourished, exhausted patient with cutaneous neurofibromatosis. Her bladder was tender and there was an indefinite mass in the right lower quadrant that was movable and tender. Her hemoglobin

CARCINOMA OF THE BLADDER—SWEETSER

was 94 per cent and the urine was full of blood. Cystoscopy on August 20 showed, after removal of large blood clots, an extensive growth in the base of the bladder; biopsy showed extremely undifferentiated carcinoma

nation was unimportant excepting arterio-sclerotic heart disease, well compensated, with a blood pressure of 200/138. The excretory urogram showed normal kidney function with a very small and markedly trabeculated blad-



Fig. 1. Case 2. Pre-operative view



Fig. 2. Case 2. Postoperative view.

grade IV. On August 23 excretory urograms (Fig. 1) showed carcinoma of the bladder with obstruction of the ureters, dilatation of the lower parts of both ureters, right hydronephrosis and calcifications in both kidneys. Film of the chest showed disseminated tuberculosis with calcification. On September 10 exploration showed no gross extension of the carcinoma beyond the bladder and apparently no metastasis; both ureters were dilated. Bladder, urethra, and the anterior third of the vagina were removed in one piece by a combined suprapubic and perineal operation, the ureters being transplanted to the skin through stab wounds in the lower abdominal quadrants. The Penrose drains were brought out through the vagina which was otherwise closed, and the suprapubic wound was closed completely. A No. 18 F. soft rubber catheter was placed in each ureter. Convalescence was satisfactory excepting one attack of bilateral pyelonephritis. Attempts were made to use cups over the ureterostomies but they fitted poorly probably because of the neurofibromatosis. Her general condition was good thereafter excepting difficulties with the catheters and her temperament (Fig. 2). On August 24, 1943, we first noted evidence of recurrence behind the symphysis and probably in the right pelvic wall. On December 15 she was sent to the cancer home of Our Lady of Good Counsel in St. Paul. At that time there was carcinomatous involvement of the labia, emaciation, vaginal bleeding and pain. She died shortly thereafter.

Case 3.—A man, sixty-eight years old, was admitted to the Minneapolis General Hospital May 3, 1943, with a history of increasing dysuria and nocturia during the past year but with no hematuria. His physical exami-



Fig. 3. Case 3.

der. When cystography was attempted only a few drops of very bloody urine were obtained by catheter and injection of 30 to 40 c.c. of air or water caused severe pain. On May 7 transurethral resection of the prostate resulted in removal of 7 grams of tissue which was reported as benign. Biopsy at the same time from an apparently benign ulcer in the bladder vault showed squamous celled carcinoma. The bladder capacity was not over 60 c.c. On May 20 cystoscopy again demon-

CARCINOMA OF THE BLADDER—SWEETSER

strated a rigid contracted bladder which was not fixed when examined by rectum with the cystoscope in place. However, seven bits of tissue removed for biopsy again showed squamous celled carcinoma. On May 24 cystec-

with secondary left hydroureter and hydronephrosis. There was no definitely visible dye in the right renal pelvis or ureter, indicating a probably more extensive right hydroureter and hydronephrosis with atrophy of



Fig. 4. Case 4. Pre-operative view.



Fig. 5. Case 4. Three and one-half years after cystectomy.

omy was performed (Fig. 3) with transplantation of both ureters to the skin. He stood the operation poorly with severe vascular collapse and considerable hemorrhage during the operation. One week after the operation his wound broke open and had to be resutured. After prolonged convalescence he went home from the hospital on September 26, 1943. On January 13, 1944, he returned and was given deep x-ray therapy at the University Hospital. On April 25, 1944, he was sent to the cancer home of Our Lady of Good Counsel. He died there.

Case 4.—A man, forty-one years old, married and with two children, was sent to me on January 19, 1942, immediately after his first visit to his doctor. He had had painless hematuria for two days in September, 1941, but had blamed it to his occupation of motorcycle policeman. The bleeding had recurred about January 1, and had continued during the past two weeks with some frequency and nocturia and some distress just before voiding. There had been some clots in the urine. Cystoscopy on the following day, January 20, showed a papillary carcinoma about 5 cm. in diameter with an extensive attachment to the trigone, posterior wall and right lateral wall and even to the anterior wall where it extended into the prostatic urethra. Both ureteral orifices were hidden by the growth. A fairly large portion of the tumor was resected transurethrally. The laboratory reported it as a papillary carcinoma Grade II, with distinct infiltration into the submucous layer of the bladder wall. A cystogram showed that a large tumor mass still remained, involving especially the posterior and right lateral portion of the bladder. Intravenous urograms (Fig. 4) also demonstrated this tumor mass and showed that there was infiltration around the left ureteral orifice,

the renal cortex especially since there was a palpable mass in the right renal area. After discussing with him the relative chance of cure and the relative risks, it was decided to first transplant the left ureter to the bowel, exploring for metastasis at the same time, then do a right nephrostomy or nephrectomy, and finally do a cystectomy.

On January 30, I transplanted the left ureter to the sigmoid. His urea nitrogen rose to 57.9 mgm. and the creatinin to 4.3 mgm. on February 2. That was another indication of poor function of the right kidney, since the temporary interference with the left kidney, following the transplantation, should not have caused nitrogenous retention if the right kidney had been active. However, he continued to put out about 800 c.c. of urine through the bladder after the left transplantation so that I thought that the right kidney might be worth saving. Therefore, on February 14 after the blood urea nitrogen reading had dropped somewhat, I transplanted the right ureter to the bowel and removed the bladder, prostate, and vesicles at the same time. The ureter was fully 1 cm. in diameter and thin-walled. That made the transplantation to the bowel more difficult, as also did the fact that we had previously transplanted the left ureter instead of transplanting the right one first, as is usually done. Simple ligation of the right ureter would have been easier if I had known and accepted Huggin's ideas and if I had agreed completely with Hinman's pronouncements on renal counterbalance. The ultimate result of my transplantation was little if any better. The bladder itself was removed with no unexpected difficulty, two Penrose drains being placed in the suprapubic wound, one of them passing out through a stab wound in the perineum. He developed a fecal and urinary suprapubic fistula after that operation, with a right pyelone-

CARCINOMA OF THE BLADDER—SWEETSER

phritis which cleared up under treatment with sulfacetamid (Sulamyd). He left the hospital March 7th in good condition. He regained his former weight rather slowly, but has worked steadily and lived a fairly normal

reported that he had just driven to Duluth and back in two days. On June 2, he reported that he was having trouble with his feet which on inquiry was found to be due to his trying to work sixteen hours a day. On



Fig. 6. Case 5. Pre-operative view.



Fig. 7. Case 5. Five months after cystectomy.

life. On September 15, 1945, three years and seven months after his operation, he weighed 206 pounds and felt well. Physical examination gave no evidence of any recurrence or metastases; his right kidney was still palpable but not tender, and there was no tenderness of the left kidney. He had no gastrointestinal difficulty and was able to go eight hours at night without emptying the rectum. Intravenous urograms (Fig. 5) showed normal left kidney and ureter, all the dilatation having disappeared. There was little, if any, function of the right kidney.

Case 5.—A man, forty-four years old, was sent to me on January 26, 1945, for painless hematuria. He had had it for a few weeks about a year previously, but had not consulted his doctor. The hematuria had recurred about January 1, 1945, and had continued intermittently in increasing degree until he sought help. His doctor requested complete examination at once. By rectal examination, a firm irregular mass could be felt in the base of the bladder beyond the prostate, which was normal. Cystoscopy demonstrated multiple very extensive papillary tumors with attachments behind both ureteral orifices and along the right lateral wall to the anterior wall and as far as the bladder outlet. No points of infiltration into the bladder muscle were seen. Forty-one grams of tissue were resected transurethrally, but it was felt that the removal was far from complete. Microscopic report on the tissue removed was papillary carcinoma Grade I. Intravenous urography demonstrated normal renal pelvis and ureters (Fig. 6). The right ureter was transplanted on February 1 and the left on February 13. Cystectomy was done on February 24. He went home in good condition on March 10. On April 15 he

September 8 he was feeling well. Physical examination found no signs of recurrence or metastases, and intravenous urography (Fig. 7) showed excellent functioning of both kidneys, the only abnormality being slight right hydronephrosis.

Conclusions

1. Cystectomy for carcinoma of the bladder is feasible in properly selected cases with proper attention to pre-operative and postoperative care.

2. In my experience, transplantation of the ureters to the bowel has given the patient a much more satisfying result than transplantation to the skin. Transplantation of the ureters to the skin at the time of cystectomy is justifiable in patients with malignant infiltrating tumors of the bladder base if one agrees to the dictum that such growths should be removed at the earliest possible moment.

3. The ultimate results of cystectomy should be good in cases with relatively less malignant papillary tumors with very extensive attachment to the bladder wall, or with multiple extensive attachments, but in my experience the ultimate results have been unfavorable in cases of highly malignant infiltrating tumors, even though limited to the bladder wall.

4. Earlier diagnosis through better education of the public and the profession only partially an-

(Continued on Page 1026)

THE MORE RECENT APPROACHES TO ALLERGY

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TO those long interested in allergy it has been apparent that no approach to the problems it presents could be satisfactory short of one which directed its effort toward the neutralization of the entire allergic state and all of its manifestations by simple procedure. The possible directions from which such development could come would seem to be two: One would be the discovery of the universal antigen, desensitization to which would eliminate all sensitivities, while the other would be identification and correction of the essential tissue defect which permitted an individual to become allergic in the first place. Both of these approaches are already being championed, and with notable success. It is the purpose of this paper to call attention to that fact and compare them in some detail.

In 1940 Evans, Bodman and Maisin published, from London, an expression of their ideas as to the nature of the tissue defect, its cause, and their experiences in attempting to correct it.¹⁷ They surmised that the defect consisted of a failure in intracellular metabolism whereby the breakdown of carbohydrate before final combination with oxygen was incomplete, and that the metabolic failure resulted from a lack, either through primary failure (inherited allergy) or some destructive agent (acquired allergy) of an enzyme necessary to that chemical process.

Their researches led to the discovery of ethylene disulphonate as the missing enzyme (or its capable substitute), its experimental trial and final clinical use. The results in human allergy were striking. Their methods are being applied to an increasing extent in this country and the growing number of reports shows results which afford abundant support for the claims of the original investigators.

Paralleling this work, an effort of possibly tremendous magnitude is being expanded in America. This has as its purpose the solution of the allergic problem by identifying the universal allergenic poison and providing means by which, through a system of vaccination, it can

be neutralized. The early observations of Dale and Laidlaw that the symptoms of anaphylactic shock were the same as those of histamine poisoning had never been forgotten.¹² They focused the attention of numerous investigators on the possibility of histamine as the possible universal cause of allergic symptoms. The theory evolved envisioned a specific antigen-antibody reaction which resulted in the release of a totally non-specific toxin, histamine (or histaminelike substance commonly referred to as H-substance) which was responsible for the actual symptoms of anaphylaxis or allergy. Since any and all of the specific reactions resulted in the release of histamine (or H-substance), regardless of whether the antigen be a food, a pollen, an animal emanation, etc., it seemed reasonable to those interested that if the development of an antibody to this H-substance could be provoked in the body a direct cut-through to the solution of all allergy (anaphylaxis) would be provided.

The early efforts were praiseworthy though disappointing.^{11,18,19,20,24,30,33} If the injection of increasing doses of histamine did not produce an antibody capable of neutralizing H-substance, it did create interest in the subject to the point where the conception of a histaminase, an anti-histamine enzyme, was conceived with the hope that the administration of such a substance to sensitive individuals might confer a more or less passive immunity which would be universal to all allergies.^{25,30} Clinical results were, however, discouraging from this approach also.^{1,5,28,41} It remained for Sheldon et al., to apply the principle discovered by Landsteiner to the problem and, thereby, add large significance to the histamine theory.³⁷

Landsteiner demonstrated that substances not antigenic of themselves, perhaps because of their simple chemical structure, could, by special chemical means, be joined to various protein molecules and thus rendered antigenic.²⁹ That is, it became possible by proper vaccination with the combined substance to bring about the development of antibodies against the previously nonallergenic simpler chemical in the combination properly re-

From the Children's Hospital, Saint Paul, Minnesota.
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ferred to as a hapten. Approaching the problem from that angle Sheldon and his co-workers succeeded in combining histamine with a modified protein fraction derived from horse serum into a compound which was shown, both in animals and humans, to be capable, in properly vaccinated subjects, of rendering such subjects not only abnormally resistant to histamine itself, but also less sensitive to their specific allergens whether the sensitivity had been induced artificially (animal anaphylaxis) or had been acquired through natural means (human allergy).

This work has been expanded both by the original investigators and others with the result that it seems reasonable to conclude that, from this source a promising method for the blanket treatment of all allergies is developing which does not require the tedious and often unrevealing detail of the search for specific sensitivities.^{6-10,13,14,21,34,35,42}

It is essential that we recognize the realities of this approach. It thinks of allergy, as we recognize it, as a symptom-complex which reveals itself because a nonspecific toxin (histamine or H-substance) has been released for distribution throughout the body by a reaction which has occurred between an antigen (which may be almost any type of substance) and its specific antibody. It would control the symptom-complex by vaccinating the body against the products of that specific union (histamine or H-substance) and thus providing an antidote for such poison in the form of an antibody which should be omnipresent in the body humors. The method is biologic in its inception and humoral in its performance.

The approach of the London investigators, whose work also shows so much promise, is quite the opposite. They are attempting to eliminate allergy, not by biologic but by chemical means, and not in the body fluids but within the tissue cells. It is their purpose to correct the defect in cellular metabolism by which a person is permitted to become allergic in the first place. It may be a coincidence of no little importance that they, also, are directing their attack against histamine or a histaminelike substance.

Their ideas may perhaps be best explained in their own words:

"Kendall (1928) published experiments showing that if involuntary muscle be suspended in

Tyrode's solution, and histamine added thereto, contraction occurs in the suspended muscle. If, however, dilute formaldehyde be added, such (allergic) contraction does not take place."²⁸ Kendall suggested that this result was brought about by a blockage by formaldehyde of the amino group in the histamine molecule. "Goldie and Sandor (1937) have actually published a series of experiments showing that ketene can block the amino group in the same manner."²³ "We thought that such a substance might be the body's first line of defense against allergy . . ." The reasons for that conclusion can become apparent only after a most minute examination of the paper as a whole.

Backgrounding their theory is a brief but rather detailed explanation of the chemical processes by which the body cells utilize carbohydrate (hexose) for the creation of energy. They explain, "In anaerobic muscle metabolism involving the greater part of the energy exchanges, oxygen is not used to burn up *sugar* (as was once thought), and never enters the molecule until . . ." (its complexity has been vastly reduced by an intricate series of intracellular chemical processes and) "*The final degradation product* is split to form carbon dioxide and water."

Among the important chemical reactions necessary to the processing of hexose toward the final degradation product is that called by Oppenheimer and Stern, "Dehydrogenation, i.e., separation of hydrogen from a donor, . . ."³¹ "Many of these . . . changes involve the action of an enzyme, dehydrogenase, whose function it is to split off these hydrogen atoms. There are many of these dehydrogenases . . . a succinic dehydrogenase, and so on."¹⁷ Referring to the final product, the substance with which free oxygen does finally combine to form carbon dioxide and water they say, "Peters (1936) has shown that this breakdown is to *acetaldehyde* . . ."³²

It would seem to have been this statement of Peters' that caused the authors to attach the significance they did to the remarks of Goldie and Sandor about ketene. Knowing that ketene was a chemical substance simpler than acetaldehyde by the mere loss of two hydrogen atoms, and realizing that acetaldehyde had been derived from hexose by a series of dehydrogenation processes, each of which had been the stripping of

two hydrogen atoms from a "donator," they envisioned that by one more stripping process ketene could always be present in the tissue cell. In their words, "We thought that a further stage of dehydrogenase action (beyond acetaldehyde [mine]) might take place in living tissue by the interaction of an enzyme on acetaldehyde with momentary formation of ketene." This, "We thought . . . might be the body's first line of defense against allergy, and that its absence, either due to inherited faulty metabolism ("inherited allergy"), or due to inhibitions by bacterial toxins, in a subject whose metabolism was already imperfect, would result in the appearance of allergic symptoms, and thus the type of allergic disease would be a function of the type of cells whose metabolism was thus affected." They conclude this "Brief Statement of Biochemical Considerations" with, "Extensive search was then instituted for some substance which might replace this part of the dehydrogenase co-enzyme system (to reduce acetaldehyde to ketene [mine]) which we postulated to be absent, or paralyzed by septic shock. For various reasons, we anticipated this . . ." (as having the chemical structure and capabilities) "typically that of ethylene disulphonate . . ." The authors propose to describe in detail this part of the work elsewhere.

It will be apparent by now, that the London investigators are advocating a *cellular* control for the allergies as contrasted with the *humoral* concept of the American workers. Each represents one of the two conceivable approaches to the problem which could offer a universal control for allergy.* Each is backgrounded in solid theory. Each is finding an increasing support from clinical sources. And each is directing its efforts against an identical toxin-histamine or histamine-like substance.

*Strictly speaking, a third possibility for the blanket treatment of allergy must be acknowledged, especially now since the evidence is piling up so rapidly that the actual cause of symptoms is the release within the body of histamine (or histamine-like substance usually referred to as H-substance). That possibility is the discovery of a medicinal antidote for H-substance to be taken either enterally or parenterally. There is recent evidence that this approach also is being probed with success.

It would seem apparent that such a method of treatment, while truly nonspecific so far as allergy is concerned and universal in its approach to the problem, would be purely symptomatic in its objectives and effective only so long as the antidote were being supplied. It would not have as its purpose the cure of the allergic state in the sense that this idea can be applied to each of the other approaches. Nevertheless, it could have tremendous value, especially in the management of the "evanescent" allergies, and perhaps as an adjunct to the other methods of approach for added and early action.

(See Curtis, A. C., and Owens, B. B.: Beta-dimethylaminoethyl benzhydryl ether hydrochloride (Benadryl) in treatment of acute and chronic urticaria. Univ. Hosp. Bull., Ann Arbor, Michigan, 11:25, April, 1945.)

There could be little justice, or even significance, in a comparison of the results that have been reported in human allergy from the two approaches up to the present time. Both methods have been able to offer encouragement in the onslaught against the common problem but the proponents of neither have been able to offer perfection.

From the available material it must be admitted that the experimental foundation of the American investigators is much the more impressive. From an adequate background of scientific theory they have proceeded to an expansive experimental program in which they have shown, either by animal or human experiment or both:

1. The substance they have contrived for vaccination contains no (or practically no) free histamine.

2. After proper hydrolysis with concentrated HCl a significant amount of histamine is released from such substance.

3. Injection of this substance seems to be incapable of producing symptoms of histamine poisoning.

4. Even though the protein fraction of the chemical was derived from horse serum it has been administered to horse-serum-sensitive patients without reaction.

5. Proper vaccination with this substance causes the production, in the serum of such vaccinated individuals, of antibodies against histamine.

6. Vaccination of rabbits produced *significant* protection against anaphylactic shock induced by ovalbumin.

7. Proper vaccination has provided noteworthy protection in a substantial percentage of a wide variety of cases of human allergies. While the number of clinical cases so far reported has been small the results obtained have been encouraging as to the possibilities offered by this approach to the solution of human allergy.

In contrast the available experimental evidence of the English investigators is relatively meager, perhaps because of the exigencies of wartime conditions, but more probably because the chemical concepts concerned did not involve humoral reactions, since antibodies were not conceived of as being important, and the demonstrable recording of intracellular processes, such as the authors envisioned, would probably be quite im-

possible except as they might be measured in clinical results.

Thus the report of their preliminary experiments is confined to three groups of animals (though much more extensive experimentation is implied). These experiments demonstrated:

1. Intraperitoneal injection of ethylene disulphonate afforded significant protection against egg-albumin anaphylaxis in guinea pigs.

2. This was true under two conditions: (a) when the protective material was administered in a single dose three hours before the shock was given, and (b) when, after three injections of this material at eight-day intervals the shock dose was withheld for two months.

3. If after multiple injections of ethylene disulphonate, the shock dose was given after a lapse of only twenty-four hours, the control pigs were better off than the experimental animals. This the authors have seen repeatedly and attribute to a temporary negative phase produced by multiple injections of ethylene disulphonate. They add, "If several weeks are allowed to elapse after the second injection of the oxidation catalyst (ethylene disulphonate [mine]), before the shock protein dose is given, the same degree of protection is observed as . . ." before mentioned.

To a clinical observer it is difficult to disbelieve the reports of the London investigators or to question the importance that they attached to the results of their experiments as a direction finder in the problem they were investigating. In this country the work has been sharply challenged by Fisk, Small and Foord who, after partial repetition, conclude that, in their own experiments, ethylene disulphonate did not afford a significant degree of protection against anaphylactic shock²², and S. M. Feinberg has dignified that work by what seems to be approving editorial comment.¹⁶ Smith, on the other hand, has reported results even more suggestive of protection than those reported by Evans, Bodman and Maisin.³⁹

In rather sharp contrast to the experimental approaches the clinical background of the latter group is much the more impressive. Their original series consisted of seventy-one cases of asthma, of which 27 per cent had been completely relieved, 67 per cent more benefited and 6 per cent failures. In this country, up to

October, 1944, four papers had been published which swelled the number of cases reported to 899. The list included most of the clinical types of allergy. Complete relief was accomplished in 51 per cent, satisfactory improvement in an additional 33 per cent, leaving a residue of 16 per cent total failures.^{3,4,38,43}

Varied references have appeared in American literature since that time which caused little deviation from the figures given above. Smith has increased his series from thirty-three to 413 cases and reports 75 per cent complete remission, 20.8 per cent amelioration, and only 4.2 per cent as complete failures.⁴⁰ Archibald reporting on forty-five consecutive cases, concludes "The results of this study are in accord with the more conservative reports on the use of nonspecific therapy in treating allergies."² Ketcham²⁷ writes me that in a series of one hundred cases of allergies of all types, he obtained complete success in 56 per cent, 50 to 75 per cent relief in 28 per cent and total failure in 16 per cent.*

I have had no personal experience with the histamine-protein method of treatment. I have, however, given substantial trial to ethylene disulphonate and with very satisfactory results. Complete failures have been few, complete successes also, but the great majority of patients have been benefited to a striking degree. This phase will be taken up elsewhere when the apparent causes of partial and temporary relief, as well as those of total failure, can be discussed adequately. However, I should like to mention the following case as an example of striking improvement, if not complete and permanent cure.

The patient was a boy, six years of age, who had been under my care since the age of six months. He was seen at that time because of a head cold which was accompanied by cough. It was found on examination that he, at this early age, had an established nasal sinusitis which was treated by nasal suction. However, from that time until February, 1944, he continued to suffer from repeated flare-ups of his sinusitis. At the age of two and a half years asthmatic bronchitis began to make its appearance and from that time on was a constant companion of his sinus flare-ups.

*Since this paper was written Kurland and Bubert have published a series of twelve patients with bronchial asthma treated by ethylene disulphonate alone. Five, or 41 per cent, were unbenefited. The rest, 59 per cent, improved from slight to a definite degree. None was cured during the period of observation, maximum of which was twenty-two weeks. The authors fail to state where, in their estimate of degree of improvement, two cases in the improved group should be classified.

(Kurland, L. T., and Bubert, H. M., "Ethylene disulphonate in bronchial asthma." Bull. School Med., University Maryland, 30, 46 July, 1945.)

As the age of three and a half years, his tendencies toward the development of asthma and asthmatic bronchitis attacks having steadily increased, tonsils and adenoids were removed. This did not interrupt progress toward asthmatic invalidism, and he spent most of the fall and winter of 1943-44 out of school, either frankly in bed or confined to his house.

On February 28, 1944, he was taken to the St. Paul Children's Hospital in preparation for treatment with ethylene disulphonate. This was administered by intramuscular injection on March 4, 1944, after which he returned to his home. The following week, during which time he had been entirely free of asthma, the dose was repeated.

Since that time (to August, 1945) I have attended him through an attack of measles and of virus pneumonia, neither of which was complicated by asthma. Aside from these two incidents I have seen him for illness only twice. The first time was for an acute upper respiratory infection February 27, 1945, when no asthma was present. The second time was one month later and then he was found to be asthmatic. The parents said that the previous infection had persisted ever since as a nasal sinusitis and that asthma in mild form had been present for four days. This cleared at once after a single nasal suction. Twice during the 17 months since he was treated with ethylene disulphonate, he was awake part of a night with a cold and slight wheeze but I was not even consulted by phone, the trouble was so mild and so transient.

One cannot call the result in this case perfect but it is doubtful that any one would not call it satisfactory. Results such as this have typified those that I have obtained with ethylene disulphonate in general.

Clinical results of this type are too striking to be disregarded. This is especially so since they have been obtained by a method of treatment which eliminates the obviously impossible task of seeking out individual allergies and then dealing with them singly. They are themselves the guarantee that extensive recognition and trial of such a method of treatment will not be long delayed within the medical profession of America. As for the histamine-protein method of approach, it has already, in spite of very limited clinical trial, been given enthusiastic approval in the high places in American Medicine.¹⁵ This very fact should assure it a sound future as a clinical instrument. It would indeed be an important development toward the alleviation of human suffering if the very early promise shown by both methods should be substantiated, and there seems to be little reason why it should not be. Both spring from a background of sound scientific facts;

both seem to be harmless,* and both have yielded a high degree of clinical success in their preliminary trials.

It should be emphasized that each represents the theoretical ideal in the treatment of the allergies for each offers simplicity in the solution of the problems concerned. It is worthy of re-emphasis that each came from one of the two possible directions from which a universal solution to allergy *could* come, namely, the approach which would desensitize to a universal antigen, and the one which would correct the tissue defect which was responsible for allergy ever developing in the first place. The incomprehensible thing is, that each is directing its attack against an identical substance, namely, histamine or histamine-like substance. Such coincidence is probably more than mere accident. It offers the hope that the two methods of treatment may be used in a complementary manner.

Summary

From almost the beginning of comprehension concerning the magnitude of the role played by allergy in human ailments it has been apparent that no method for its control could ever be satisfactory short of one which bi-passed the laborious and impossible sleuthing processes necessary to seek out and then deal with separately, the endless varieties of allergens to which any patient might be sensitive. Such a development could come from either of two directions—it could provide a universal allergen, desensitization to which would eliminate all sensitivities, or it could recognize and correct a possible defect in the tissues of allergic individuals whereby they had been enabled to become sensitized in the first place.

It has been the purpose of this paper to call attention to the fact that that long-awaited shortcut made its appearance in clinical medicine, not from *one* of the anticipated directions but from *both* almost simultaneously. One originated in England and would eliminate the allergic state by correcting the tissue defect by which such a

*Epstein has recently called attention to a report by Braden recording a severe constitutional reaction following the use of Hapamine, a commercial histamin-protein product. The original report could not be consulted since it is available only to a group of allergists belonging to a special correspondence club.

(Epstein, S.: Allergic skin diseases, eczema—urticaria—drug eruptions, a critical review of recent literature. *Ann Allergy*, 3:306, 1945.)

state was permitted to exist. The other had its origin in America and proposes to correct all allergies by providing, through vaccination, an antibody which would neutralize the toxin which, it contends, is the universal cause of symptoms in all allergic conditions. The English method is chemical in nature, and works within the tissue cell. The American approach is biologic and would accomplish its results through the presence of antibodies carried in the tissue fluids. Both conceptions are deeply rooted in fundamental scientific background, and both have the backing of experimental support. Each is gaining a following among clinically minded physicians, which speaks well for its ultimate success as a proven clinical instrument in the control of the allergies. Each is directing its efforts against the same poison—histamine or histamine-like substance. It is difficult not to believe that each is right, if neither is perfect, and it does not seem inappropriate to hope that, at least in part, one method may be capable of covering the other's deficiencies so that, used together, a much higher success may be attained in the control of the allergies.

Conclusion

It is my conviction that means for the effective control of allergy with its wide variety of manifestations by procedures simple enough to be available to every practitioner of medicine for use in his office are immediately at hand. The basis for that conviction is contained in the preceding pages.

AUTHOR'S NOTE: It is hoped that readers will realize that the implications contained in the designations "British and American approaches" are purely arbitrary. Both origin of ideas and development of theories have been so interchanged that they really cannot be so simply divided. For instance, it is highly probable that both owe their essential beginnings to the work of British scientists, Dale and Laidlaw. From that point on, it is quite evident that both have borrowed from each other, and even from others on occasion. It is nevertheless a fact that the application of theory to clinical practice does permit the separation as indicated in the paper.

Bibliography

- Alexander, H. L., and Bottom, D.: Failure of histaminase to protect guinea pigs against histamine and anaphylactic shock. *J. Immunol.*, 39:457-460, (Dec.) 1940.
- Archibald, H. G.: Ethylene disulphonate and sterile distilled water controls in the treatment of children's allergies. *Arch. Pediat.*, 62:219-222, (May) 1945.
- Bartlett, C. L.: Treatment of the allergic state in children with ethylene disulphonate; a summary of 247 cases. *Arch. Pediat.*, 61:311-316, (June) 1944.
- Bartlett, C. L.: Treatment of the allergic state with ethylene disulphonate. *M. Rec.*, 157:477-480, (Aug.) 1944.
- Best, C. H., and McHenry, E. W.: A note on histamine. *J.A.M.A.*, 115:235, (July) 1940.
- Cohen, M. B.: The basic relationship of allergy and immunity. *J. Allergy*, 4:116-120, (Jan.) 1943.
- Cohen, M. B., and Friedman, H. J.: Antibodies to histamine induced in human beings by histamine conjugates. *J. Allergy*, 14:195-202, (March) 1943.
- Cohen, M. B., and Friedman, H. J.: Immunity against H-substance. *J. Allergy*, 15:245-248, (July) 1944.
- Cohen, M. B.: The immunologic management of a patient with allergy. *J. Allergy*, 15:274-278, (July) 1944.
- Cohen, M. B.: Urticaria and angioneurotic edema. *Ohio State M. J.*, 39:1120-1122, (Dec.) 1943.
- Dale, H. H.: Some chemical factors in the control of circulation. *Lancet*, 1:1285, (June 22) 1929.
- Dale, H. H., and Laidlaw, P. P.: The physiological action of B-minazolyethylamine. *J. Physiol.*, 41:318-344, 1910.
- Derbes, V. J.: Some recent advances in bronchial asthma. *M. Clin. North America*, 29:460, (March) 1945.
- Dragstedt, C. A.: The significance of histamine in anaphylaxis. *J. Allergy*, 16:69-77, (March) 1945.
- Editorial: Histamine specific antibodies. *J.A.M.A.*, 124:362, (Feb. 5) 1944.
- Editorial: Nonspecific inhibition of anaphylaxis. (Signed S.M.F.) *J. Allergy*, 15:302, (July) 1944.
- Evans, G., Bodman, J., and Maisin, J. H.: The chemical control of allergy. *M. Press*, 203:457, (May 29); 476, (June 5) 1940.
- Farmer, L.: Non-specific "desensitization" through histamine. *J. Immunol.*, 36:37-44, (Jan.) 1939.
- Farmer, L.: Histamine in anaphylaxis and allergy. *Bull. New York Acad. Med.*, 16:618-630, (Oct.) 1940.
- Feldberg, W.: Histamine and anaphylaxis. *Ann. Rev. Physiol.*, 3:671, 1941.
- Fell, N., Rodney, G., and Marshall, D. E.: Histamine-protein complexes: synthesis and immunologic investigation. I. Histamine-azoprotein. *J. Immunol.*, 47:237-249, (Sept.) 1943.
- Fisk, R. T., Small, W. S., and Foord, A. G.: The experimental use of ethylene disulphonate (allergosil brand) in the prevention of anaphylaxis in guinea pigs. *J. Allergy*, 15:14-17, (Jan.) 1944.
- Goldie, H., and Sandor, G.: Influence de l'acétylation par le cétène sur les propriétés antigéniques et anaphylactogènes des protéides du sérum antidiphthérique. *Compt. rend. Soc. de Biol.*, 126:291-295, 1937. (Quoted from Evans et al.)
- Hare, R.: Experimental invasion into vascular reactions of susceptible skin to protein. *Heart*, 13:227-238, (Sept.) 1926.
- Karady, S., and Browne, J. S. L.: Effect of histaminase treatment on histamine and anaphylactic shock in guinea pigs. *J. Immunol.*, 37:463-468, (Nov.) 1939.
- Kendall, A. I., and Bishop, G. H.: Effects of histamine formaldehyde and anaphylaxis upon response to electrical stimulation of guinea-pig intestinal muscle. *Am. J. Physiol.*, 85:561-568, (July) 1928. (Quoted from Evans et al.)
- Ketcham, W. M.: Personal correspondence.
- Knoll, A. F.: Ineffectiveness of histamine in anaphylactic shock in guinea pigs. *Proc. Soc. Exper. Biol. & Med.*, 45:606-609, (Nov.) 1940.
- Landsteiner, K.: The specificity of serological reactions. 2nd ed. Cambridge: Harvard Univ. Press, 1945.
- Lewis, T., and Grant, R. T.: Vascular reactions of skin to injury: anaphylactic skin reaction. *Heart*, 13:219-225, (Sept.) 1926.
- Oppenheimer, C., Sternberg, K. G., and Roman, W.: Biological Oxidation. The Hague; Junk, 1939. (Quoted from Evans et al.)
- Peters, R. A.: The biochemical lesion in vitamin B₁ deficiency. *Lancet*, 1:1161-1164, (May 23) 1936.
- Ramirez, M. A., and St. George, A. V.: A contribution to the etiology of asthma. *M. J. & Rec.*, 119:71-72, (Jan. 16) 1924.
- Rocha e Silva, M.: Recent advances concerning the histamine problem. *J. Allergy*, 15:399-413, (Nov.) 1944.
- Rodney, G., and Fell, N.: Histamine-protein complexes: synthesis and immunologic investigation. II. Ethyl carbamido protein. *J. Immunol.*, 47:251-259, (Sept.) 1943.
- Roth, G. M., and Horton, B. T.: Histaminase: physiologic effects on man and its therapeutic value in medicine. *Bull. New York Acad. Med.*, 16:570-584, (Sept.) 1940.
- Sheldon, J. M., Fell, N., Johnston, J. H., and Howes, H. A.: A clinical study of histamine azoprotein in allergic disease. *J. Allergy*, 13:18-30, (Nov.) 1941.
- Smith, N. M.: The basic treatment of allergic conditions. *Clin. Med.*, 49:324-327, (Nov.) 1942.
- Smith, N. M.: Cellular metabolism and its effects on allergic conditions. *Mississippi Valley M. J.*, 65:20-23, (Jan.) 1943.
- Smith, N. M.: Associated pathologic conditions and their influence in allergic states. *Clin. Med.*, 51:323-326, (Nov.) 1944.
- Toomey, J. A., Kriete, F. M., and Epstein, H. C.: Torantil (histaminase) in urticaria following serum administration. *J. Pediat.*, 24:290-292, (March) 1944.
- Warren, E. W., and Findley, T.: Recent advances in pharmacology. *M. Clin. North America*, 29:438, (March) 1945.
- Wasson, V. P.: Ethylene disulphonate in the treatment of allergic children. *Arch. Pediat.*, 60:511-517, (Sept.) 1943.

THE MANAGEMENT OF OCCIPITO-POSTERIOR POSITIONS

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THIS discussion will consider the treatment of presentations of the fetal head in which the occiput points directly or obliquely posterior, which do not rotate to the front spontaneously. A report will be made on the method of treatment used in St. Luke's Hospital in those cases of persistent posterior position which were found in 2,000 consecutive deliveries.

Williams¹, in 1930, analyzed 5,176 histories and found persistent posterior positions in 9.5 per cent. Many other heads enter the pelvis in a posterior or transverse position, but the great majority rotate to the front and are never diagnosed. Williams states that only 8.8 per cent of those cases which are originally obliquely posterior rotate into the hollow of the sacrum and so become persistent occipito-posterior positions. Since the almost universal abandonment of vaginal examination early in labor the study of the mechanism of labor has been considerably handicapped, as rectal touch alone is not completely satisfactory in making an early diagnosis of the location of the sutures and fontanelles. Many physicians have an unwarranted fear of posterior positions, but if the fact is remembered that over 90 per cent of them will rotate to the front, it places any single case in a more favorable light.

The most important factor in the treatment of a case of persistent occipito-posterior position is the diagnosis. If possible the cause should be found. In the majority of cases no definite etiological factor can be proven, but it is known that lateral contraction of the outlet or a mild degree of funnel pelvis is found in about 25 per cent of those needing operation and that the weight of the babies tend to be above normal. Williams states that if the bi-tuberosity diameter is 8 cm. or less, we are more likely than not to have a persistent posterior occiput. If undue delay occurs it is wise to make a vaginal examination for diagnosis or if the patient is a primipara and section is being considered, an anterior-posterior and lateral x-ray film will indicate the condition. Labor is usually prolonged, the contractions are painful and ineffective and the bag of water often rup-

tures early. These cases usually need more than the usual sedative to give periods of rest and intravenous glucose is valuable in sustaining strength during the process of cervical dilation.

Active intervention must be postponed until the cervix is dilated or can be easily and safely dilated by hand; only in very rare instances are cervical incisions indicated. Interference is rarely needed until the head has descended low enough so that a low or at most a low mid-forceps application can be made. If such descent does not occur and it is felt after due consideration that delivery should be attempted, a version is much safer than a too high forceps application. In this situation be prepared to use forceps on the after-coming head as the dystocia is probably due to a moderately laterally contracted pelvis.

If delivery is indicated after descent of the head, manual rotation of the occiput to the front should first be tried. Pomeroy's maneuver is a good method. In right occipito-posterior the attendant bends forward, standing with his face to the right thigh, the right hand is inserted into the vagina so that the palm of the hand covers the posterior occiput and the fingers grasp the head which is pushed up. An attempt is made to also engage the shoulder with the fingers and the occiput is rotated to the front if possible. In left occipito-posterior the attendant faces the left thigh and the same maneuver executed with the left hand. Aid may be given by abdominal manipulation either using the other hand or an assistant.

After rotation has been accomplished, the head is pressed down into the pelvis again from above and if desired a volsellum forceps can be used to grasp the scalp and hold the head in position while forceps are applied. Very good results are reported and precise and detailed directions have appeared in the recent literature, notably by R. A. D. Gillis², S. S. Rosenfeld⁴ and by George G. Cochran, Jr.²

The only danger in this form of treatment is that the cord may prolapse with the gush of fluid which occurs when the head is pushed up and disengaged, in which case a version must be done at once. I have not always succeeded with this

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maneuver, and often the head turns back into the former position in spite of efforts to prevent it. Long fingers are a great help in grasping the head and in turning the shoulders.

If manual rotation fails, forceps must be used, but if the head has been displaced upward during the attempt it is better to allow the pains to again push the head into the pelvis before using forceps. The head may be delivered by forceps as a posterior vertex, but in that case a large episiotomy should be done to avoid extensive lacerations. If the head is well flexed this procedure is recommended by some authorities in preference to attempts at rotation, as the head comes through in a more favorable position than it will if it is partially extended.

In the well-flexed attitude the small fontanelle is felt about in the middle of the pelvic cavity and the large fontanelle is concealed or nearly so up under the symphysis pubis. If the head is partially extended or in deflexion the large fontanelle is easily felt and the small fontanelle is far up and posterior. If the head is in deflexion the occiput had better be rotated to the front with forceps to avoid cranial injury.

The rotation may be accomplished by the Scanzoni maneuver using Simpson forceps which is familiar to all of you. Bill's method is similar to the Scanzoni but Bill uses a solid bladed forceps, rotates the head without traction, removes the forceps, re-applies them as in ordinary anterior position, often using an axis traction arrangement if the head is not on the floor.

I prefer the Kielland forceps in the posterior positions and also in the cases with deep transverse arrest and often use them in ordinary anterior positions. These forceps have little or no pelvic curve and have a sliding lock. There is no time for a detailed description of their use in this paper. Suffice it to say that the blades are applied over the molar bones with the front of the forceps facing the occiput wherever it points. If the occiput is directly posterior the forceps are applied upside down. If the sagittal suture is transverse, the forceps come to lie in a transverse position with the front facing the occiput. It is in making this application that the sliding lock comes into play. After the application the head is rotated without traction. Indeed it is often advantageous to raise the head a little. Rotation is usually easy. It is more difficult to get proper application. After the occiput is brought to the front, the forceps

ST. LUKE'S ANALYSIS, POSTERIOR POSITIONS 2,000 Consecutive Deliveries

Spontaneous Rotation and Delivery.....	49
Spontaneous Delivery as Persistent Posterior.....	18
Spontaneous Rotation but Forceps Delivery.....	11
Manual Rotation with Forceps Delivery.....	6
Forceps Rotation and Delivery.....	10
(1 manual rotation failed, 8 Kielland Forceps)	
Forceps Delivery as Persistent Posterior.....	12
(one maternal death, one fetal death)	
Version.....	3
(after failure of manual or forceps rotation cervical incision one case)	
Section.....	3
(trial labor 2, dysproportion 1)	
Craniotomy.....	1
(hydrocephalus)	
Spontaneous Rotation.....	49
Persistent Occipitoposterior.....	64

may need to be adjusted slightly and then the head is delivered in the ordinary way.

In an analysis of the histories of 2,000 recent consecutive deliveries at St. Luke's Hospital the following methods of delivery were found to have been used in all the cases in which posterior positions were mentioned. There were 113 such cases. It is obvious that a great many early posterior positions were not diagnosed as the occiputs rotated rapidly to the front and delivery was accomplished in the anterior positions.

There was one maternal death in this series of posterior position, a neglected case from the country with dead baby, sepsis and pneumonia on admission. The baby was delivered by forceps as a persistent posterior. There was one fetal death in this series due to intracranial hemorrhage, a delivery by forceps in a posterior position.

L. A. Calkins¹, in analyzing 2,130 histories in which great care was taken to make an early diagnosis, found that occipito-anterior and occipito-posterior occurred with about equal frequency and that anterior rotation occurred in 94 per cent of posterior positions. He found that rotation occurred before complete dilatation in 25 per cent, during descent in 37 per cent, and while on the perineal floor in 37 per cent. In this series we have 64 persistent posteriors out of 2,000 cases.

In Calkins' 2,130 cases, about one-half were posterior at some time during labor and 6 per cent of these failed to rotate, giving 65.9 persistent posterior, which is remarkably close to our figures. In other words, persistent occipito-posterior position occurred in the women of Kansas and Northern Minnesota in a little over 3 per cent of the *total deliveries*. Williams found that the same condition occurred in 9.5 per cent of the deliveries in Baltimore. Calkins states that only 6 per cent of the original posterior

positions fail to rotate to the front while Williams found that nearly 8.8 per cent failed to rotate. There is undoubtedly a larger percentage of contracted pelvis in Baltimore than there is in Kansas or Minnesota.

In an analysis made some years ago of 1,000 consecutive personal deliveries by the author, the Kielland forceps were used as rotators sixty-six times. However, this figure also included cases of deep transverse arrest which are not considered here, but which occur with about equal frequency as persistent posterior. So that, again, we have about 3 per cent of total deliveries with persistent posterior positions.

Summary

A brief discussion of the treatment of persistent

occipito-posterior position of the fetal head is presented together with a report of the frequency and methods of treatment of this condition occurring in 200 consecutive deliveries in St. Luke's Hospital. A comparison is offered as to the frequency of posterior positions in Baltimore, Kansas and Northern Minnesota.

References

1. Calkins, L. A.: Occiput posterior; incidences, significance, and management. *Am. J. Obst. & Gyn.*, 38:993-1001, (Dec.) 1939.
2. Cochran, Jr., George G.: Pomeroy maneuver (rotary version); an evaluation of results in 200 cases. *Brooklyn Hosp. J.*, 2:155-168, (July) 1940.
3. Gillis, R. A. D.: Vertex occipito-posterior positions. *Pennsylvania M. J.*, 43:1586-1591, (Aug.) 1940.
4. Rosenfeld, Samuel S.: Treatment of persistent occipito-posterior position by 180 degree manual rotation of occiput. *Am. J. Surg.*, 51:340-342, (Feb.) 1941.
5. Williams, John Whitridge: Analysis of 1,000 consecutive labors with child presenting in obliquely posterior position. *Proc. Intern. Postgrad. M. A. North America* (1930), 6:50-54, 1931.

JAUNDICE—A METHOD OF DECIDING WHERE SURGICAL TREATMENT SHOULD SUPPLEMENT MEDICAL CARE

(Continued from Page 986)

Vater, have a definite clinical, pathological and laboratory profile. The period is with us now when the pancreas is being removed either in part or whole. Well-equipped surgeons have removed the entire pancreas successfully. This field is rapidly expanding aided by improved anesthesia.

(b) Caution must be used in overdiagnosing stone in the common duct or in the ampulla of Vater. Such an "accidental" finding where the surgeon expected to find cancer has led later to many hasty explorations; and often the true facts are not revealed nor are all possible surgical corrections ventured.

(c) Even where cholelithiasis is present it is possible that these stones are not the primary cause of the jaundice. Note Cases 9 and 10. The patient may have an intercurrent hepatitis. Operation should be postponed.

(d) Trauma to the liver ductal system results in some variation of the blueprint of stone or tumor. We have had no recent instance to fit into this report. Usually there will be the situation developing after operations on the gall bladder and immediate trouble. The common duct is cut or its drainage results in obstructing scars.

(e) Surgeons must be slow to assume that an early insidious jaundice is due to outside pres-

sure of glands on the common duct. Most cases so diagnosed are instances of primary hepatitis.

(f) There is a place for diagnostic biopsies of the liver where hepatic cirrhosis is suspected. For the review here given we have *not* needed it. It must be recalled that jaundice is not an early sign or a common finding in cirrhosis.

References

1. Clagett, O. T.: Personal communication.
2. Dennis, C.: Modified Whipple operation for cancer of head of pancreas. *Surg.*, 12:201, (Aug.) 1942.
3. Hanger, F. M.: Serological differentiation of obstructive from hepatogenous jaundice by flocculation of cephalin-cholesterol emulsions. *J. Clin. Invest.*, 28:261-269, (May) 1939.
4. Lichtman, S. S.: Diseases of the Gall Bladder, Liver and Bile Ducts. Philadelphia: Lea & Febiger, 1942.
5. Lord, J. W., and Andrus, W. DeWitt: Differentiation of intrahepatic and extrahepatic jaundice; response of plasma prothrombin to intramuscular injection of menadiol (2 methyl-1, 4-naphthoquinone) as diagnostic aid. *Arch. Int. Med.*, 68:199-210, (Aug.) 1941.
6. Quick, A. J.: Intravenous modification of hippuric acid test for liver function. *Am. J. Digest. Dis. & Nutrition*, 6: 716, 717, (Dec.) 1939.
7. Roberts, W. M.: Blood phosphates and van den Bergh reaction in differentiation of several types of jaundice. *British M. J.*, 1:734-738, (Apr. 29) 1933. Variations in phosphatase activity of blood in disease. *J. Exper. Path.*, 11:90-95, (April) 1930.
8. Steigman, Frederick, and Dyneiwicz, Josephine M.: Influence of phenolphthalein ingestion on red blood cell resistance to hemolysis. *Am. J. Digestive Dis.*, 11:279-281, (Sept.) 1944.
9. Watson, C. J.: Studies of urobilinogen, improved method for quantitative estimation of urobilinogen in urine and feces. *Am. J. Clin. Path.*, 6:458-475, (Sept.) 1936.
10. Watson, C. J.: Studies of urobilinogen, urobilinogen in urine and feces of subjects without evidence of disease of liver or biliary tract. *Arch. Int. Med.*, 59:196-205, (Feb.) 1937.
11. Watson, C. J.: Personal communication.
12. Whipple, A. O.: Surgical treatment of cancer of the ampullar region and head of pancreas. *Am. J. Surg.*, 40:260, 1938.
13. Whipple, A. O.: Present-day surgery of the pancreas. *New England J. Med.*, 226:515, 1942.

CLINICAL-PATHOLOGICAL CONFERENCE

ADRENAL HEMORRHAGE IN THE NEWBORN

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We wish to present a study of three cases of adrenal hemorrhage in newborn infants. These represent ten years' experience in a general hospital with a total of 9,500 births, among which were 216 stillbirths and 236 newborn deaths, with 90 per cent necropsies. Our criterion for hemorrhage in the adrenal is a minimum of a microscopically proved complete disruption of the regular irregularity of the normally degenerated cortical cells and their surrounding congested sinusoids by massed red blood cells. Gross swelling and hemorrhagic discoloration of the central area is not considered sufficient evidence of hemorrhage.

Case Presentations

Case 918 was a full-term, 4,515-gram, white, male infant, rotated with Kielland's forceps and delivered after a rather prolonged labor, by Dr. Arnold Swenson. No resuscitation was necessary and the infant appeared in good condition until about four and a half hours after delivery when his color was found to be poor and dusky. The skin was cold and clammy. He was crying loudly at the time. He vomited large amounts of dark brown material twice on his second day. His temperature reached 100.8°F. At this time he appeared acutely ill, cyanotic, and had a rapid, jerky respiration. His skin was dry. There were some moist râles in the bases of the lungs. The abdomen was distended and tympanitic on the left side, but dull over the right flank. There did not seem to be any tenderness over the liver. He was given 60 c.c. of whole blood intramuscularly during this second day. X-ray examination revealed no pathology in the lungs. During the last two hours respirations became shallow and gasping. The cyanosis continued in spite of oxygen therapy and stimulants. The clinical diagnosis made by Dr. S. N. Litman was adrenal hemorrhage of the newborn.

A necropsy revealed an estimated 250 c.c. of blood infiltrated throughout the retroperitoneal tissues on the right side. There was possibly 50 c.c. of bloody watery fluid in the peritoneal cavity. Fragments of the right adrenal were found scattered in the blood clot in the vicinity of the normal site of the right adrenal gland. Histologic sections revealed extensive hemorrhages and necrosis of cortical tissue with moderate neutrophilic infiltration in small areas. There rarely remained a few viable appearing cortical cells immediately under the capsule. There was a small hemorrhage in the left adrenal gland, totalling about 3 c.c.

There were a few petechiae in the lungs and on pleural surfaces. No other evidence of hemorrhage or disease process was found.

Case 1510 was a 3,925-gram, full-term, well-developed, white, male infant. Low forceps were applied by Dr. W. A. Coventry. The child was somewhat cyanotic but quickly responded after having been given carbon dioxide. He appeared entirely normal excepting for a slight lethargy noticed by Dr. O. W. Rowe. There was also a slightly more than usual weight loss. Routine hematologic studies and temperature readings were normal. Three hours and a half before the child's death it was noticed that his condition was very poor. He was cyanotic and markedly icteric. The pulse was 130. Respirations were shallow and rapid. Breath sounds seemed abnormally coarse, almost bronchial, in type. An x-ray of the lungs was negative for disease process. The clinical impression was intracranial hemorrhage or congenital heart disease. The infant became rapidly weaker, respirations irregular, before cessation of breathing.

The necropsy revealed a right adrenal gland swollen and rounded to from 1.5 to 3 cms. in its dimensions with a deep red color of the outer surface and a dark red hemorrhagic appearance of the entire cut surface. Histologic sections reveal extensive necrosis and hemorrhage in the cortical tissues (Fig. 1). There remained a few viable appearing cortical cells under the capsule. The left adrenal was quite normal in its gross and microscopic appearance. No other disease process was found in the brain or other organs.

Case 3199 was a 2,610-gram, white, male fetus, who had a rapid spontaneous delivery under the care of Dr. F. H. Magney. The child appeared entirely normal except for slight cyanosis from which he recovered after a short period of artificial respiration. The infant appeared to follow a normal course until he was found with a cyanotic, cold skin, dead in the crib three days after birth.

A necropsy revealed no significant changes except for an approximate 6 c.c. hemorrhage in the left adrenal gland. There were also very slight hemorrhages in the lungs, stomach, and kidneys. No other explanation for the death could be found.

Etiology

Hemorrhage is the result of one or a combination of three factors including defective blood clotting mechanism, internal disturbance in the vessel wall, and external

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trauma to the vessel wall. Any combination of these factors may play an important part in adrenal hemorrhage of the newborn. The relative importance of these three factors may vary from case to case. It may be that the altered blood clotting mechanism, a lowered prothrombin value (hemorrhagic disease of the newborn), may be of importance.¹ Increased capillary permeability as the result of a spontaneous physiologic involution in the reticular and fascicular areas of the cortex immediately before or after birth (Fig. 2) must be a fundamental etiologic factor. In spite of the recorded blood supply of six times its own weight in a minute, the greatest of any organ in the body, one can see evidence of red blood cell stasis and hypoxia in the engorged and frequently unsupported capillaries of the central area of the suprarenal. The endothelial cells lining these capillaries occasionally contain much hemoglobin pigment apparently as the result of destruction of red blood cells, possibly due to disorganization of blood flow. The engorgement and dilatation of sinusoids may be so great as to make it a difficult matter to recognize small hemorrhages, thus causing disagreement among pathologists and variations in statistics. Three cases originally considered adrenal hemorrhages of the newborn were culled out of our series during this study of a more exacting definition of the term adrenal hemorrhage. An explanation for the physiologic involution of the adrenal is not agreed to by authorities. The often repeated theory that the increased oxygen tension of the newborn causes cortical degeneration is not tenable because the involution is frequently advanced before birth and the majority of hemorrhages appear to occur at the time of birth. Asphyxia^{3,18} during and after labor is generally believed to increase capillary permeability.

Given an infant with extremely friable and congested adrenal glands and possibly a prolonged prothrombin time, one has an ideal situation in which the stresses and strains of labor and resuscitation may well start a serious hemorrhage. The importance of trauma starting these hemorrhages has been repeatedly mentioned.^{5,10,11} Compression of the inferior vena cava between the liver and the vertebral column, thrombosis of suprarenal veins, acute infections, syphilis, eclampsia, and sudden changes in blood pressure due to crying, vomiting, coughing, et cetera, have been described as possible etiologic factors.

Pathologic Anatomy

The adrenals may be swollen and more than twice their average size (5 grams) as a result of unusually severe physiologic involution without there being microscopic evidence of hemorrhage. This manifestation may be either bilateral or unilateral. From this extreme physiologic disturbance to extensive retro-peritoneal and intraperitoneal hemorrhages with exsanguination similar to our case 918, there are all gradations of hemorrhages possible. Undoubtedly many small and especially unilateral hemorrhages may go completely unrecognized, and in some instances may appear as healed and occasionally pigmented scars in later life. The great majority of deaths due to adrenal hemorrhage are bi-



Fig. 1. (left) Extensive necrosis of cortex following hemorrhage sparing narrow subcapsular layer of cortical cells. From case 1510.

Fig. 2. (right) Physiologic involution of adrenal medulla in the newborn. Note congested sinusoids and degenerated cords of cortical cells.

lateral hemorrhages. Unilateral lesions causing death must be associated with some reflex suppression of the hormonal activities of the contralateral organ. One can inject from 10 to 20 c.c. of blood into a normal adrenal of the newborn before its capsule will burst.

Pathologic Physiology

The important physiologic alterations described in the literature are the result of blood loss and decreased cortical endocrine production. The loss of the medullary hormones does not appear to be of importance, at least not in the newborn, where the medullary tissue is very poorly developed. Acute cortical hormone deficiency^{5,14} results in alterations in: the functions of the central nervous system, body metabolism, muscular efficiency, cardiovascular function, gastro-intestinal stability, renal competency, carbohydrate, sodium and potassium metabolism, skin and activities of other glands of internal secretion. The effects of loss of cortical endocrines on body temperature appears to be the result of a release of their normal counter action upon the metabolic stimulating activities of the thyroid.⁵ The cortical hormones play an important role in regulating respiration either by directly furthering the process

CLINICAL-PATHOLOGICAL CONFERENCE

TABLE I.

Case	Clinical Manifestations									Pathology		
	Resuscit.	Sex	Respir.	Pulse	Temp.	Abdomen	Skin	Clin. Diag.	Death	Left Adrenal	Right Adrenal	Other Hem.
918	Not necessary	Male	Rapid Jerky	—	Reached 108.8°	Distended Dull in rt. flank	Cyanotic, cold clammy	Adrenal hemorrhage	36 hr.s.	Hemor. 3 c.c.	Rupture hemor. 250 c.c.	Petechia Pulmon.
1510	CO ₂ given	Male	Labored Rapid	130	Normal		Cynaotic	Cerebral hemorrhage Br. pneum.	6 days	None	5 c.c.	None
3199	Artif. respiration	Male	Normal	—	Normal	Normal	Cyanotic Cold	None	3 days	6 c.c.	None	Mild pulmon. G.I.T. kidney

of oxygen utilization in the tissues or by influencing the nervous center of respiration.^{12,14,17} Hyperpnea is a frequent result of acute cortical hormone deficiency. The counter activities of cortical hormones and insulin have been demonstrated by many authorities. Deficient cortical hormones may cause serious hypoglycemia in either the acute process of adrenal hemorrhage or the chronic process of Addison's disease.^{7,15,18} In adrenalectomized animals, the kidneys begin to fail and protein metabolites appear in increased amounts in the blood.⁷ These changes have also been described in association with adrenal hemorrhage of the newborn.^{8,15}

Clinical Recognition

Symptoms and signs of adrenal hemorrhage of the newborn may be classed in two groups: those which are the result of the hemorrhage, including both general and local effects, and those resulting from cortical insufficiency. Goldzieher and Gordon⁵ present the following classification of symptomatology: (1) symptoms of acute adrenal insufficiency; [a] endocrine: rapid respiration, high temperature, rash (purpura or petechia), metabolic changes, convulsions and cyanosis; [b] associated symptoms: gastro-intestinal disturbances such as vomiting, diarrhea, and abdominal pains and nervous conditions such as coma, convulsions and twitching; (2) symptoms of adrenal hemorrhage; [a] general: shock, collapse, weak and irregular small pulse, cold extremities, air hunger, and increasing pallor; [b] the abdomen is generally distended and gives a boggy sensation, abdominal pain, palpable tumor in one or both kidney regions, peritoneal symptoms with intraperitoneal hemorrhage. In the eighty-one cases of their review the more common manifestations in the order of their frequency were hyperpyrexia (50 per cent), rash, increased respiratory rate, convulsions, cyanosis and vomiting (25 per cent). The less frequent findings were pallor, abdominal distention and boggy, palpable abdominal tumor, hemoperitoneum and jaundice.

These authors stress the importance and frequency of a typical clinical picture very suggestive of pneumonia, with rapid respirations and increased temperature but without physical findings of pulmonary infection "pseudopneumonia of the newborn." The onset is more often immediately after birth but occasionally suddenly developing a few days later. The infant generally re-

fuses nourishment, may be apathetic and cyanotic, and develops a petechial rash over skin surfaces. There may be a mass, or masses, palpable in the kidney areas, or the abdomen may become boggy and distended. Vomiting, convulsions, twitchings, jaundice and diarrhea may be present. A second clinical picture is that of a child with a sudden onset of signs of shock, collapse and death within a short period of from twenty-four to forty-eight hours. In the majority of cases the clinical picture could be called the newborn version of the Waterhouse-Friderichsen's syndrome^{4,9,16}, which is more completely manifest in older children and adults. There is also a distant relationship to Addison's disease with its insidiously developing cortical adrenal insufficiency and its resultant widespread muscular weakness, pigmentation of the skin, hypotension, hypoglycemia, and metabolic disturbances in water, sodium and potassium. Adrenal hemorrhage of the newborn is recognized before death much more frequently than a few years ago. Laboratory procedures of possible assistance may reveal a hypoglycemia, mild azotemia, leukocytosis, decreased blood specific gravity, and a progressive anemia. Responses to specific therapy may have some diagnostic significance.

Treatment

Reported cures in the literature are rapidly becoming more numerous.^{1,2,8,15} Treatment should be based upon combating: (1) internal hemorrhage, (2) lowered prothrombin value of the blood, (3) cortical adrenal insufficiency, 4) hypoglycemia. The prophylactic use of vitamin K in the mother a few hours before delivery may prove to be of importance in preventing hemorrhagic disease of the newborn, and adrenal hemorrhage.¹ In case 3199 vitamin K was given to the mother three hours before delivery. The other two cases occurred before the vitamin K era. Methods of resuscitation, avoiding blows and pressure over the adrenal areas are fundamental. Clifford¹ reports four cases cured out of eight newborn infants with suprarenal hemorrhage. He stresses the importance of early recognition and treatment with blood transfusions. Potent cortical extracts, 10 per cent glucose, and vitamin K may be of great importance in different cases.

(Continued on Page 1042)

◆ HISTORY OF MEDICINE IN MINNESOTA ◆

NOTES ON THE HISTORY OF MEDICINE IN HOUSTON COUNTY PRIOR TO 1900

By NORA H. GUTHREY
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(Continued from the November Issue)

Always an earnest student, Dr. Johnson from early years made constant use of his exceptionally fine medical library, and it is evidence of his perception and scientific imagination that he early possessed and applied a greater knowledge of asepsis and antisepsis than was usual among physicians of his period of greatest activity. A skilled obstetrician, he successfully delivered 3,000 babies. Throughout his career he gave his services freely to the poor and helpless, and he unceasingly battled the cultists and quacks, both as an individual physician and as a representative of the medical associations with which he was affiliated. He was a charter member and once the president of the Blue Earth Valley Medical Society; a member of the Southern Minnesota Medical Association, the Minnesota State Medical Association and the American Medical Association.

In 1883, at Houston, Dr. Johnson was married to Ruth Ann Warner, a teacher in the schools, daughter of Albert and Mary Warner, of Chicago. Dr. and Mrs. Johnson had two children, Nina Foy (Mrs. Robert S. Wallace, of St. Paul) and Donald Warner Johnson, of Fairmont, since 1921 a physician and surgeon, graduate of the University of Chicago. Mrs. H. P. Johnson died in Fairmont on April 15, 1930.

Dr. Johnson's early medical practice, perhaps especially in the Houston days, was eventful and varied. The blizzards of those winters did not keep him from his patients; he often cut fences and drove overland, borrowing one team after another from farmers en route as the horses became exhausted from struggling through the snow. He loved horses, often rode on horseback, and kept fine trotters for driving. In later years he owned the third motor car in Martin County and when motorcycles became available, he used one.

With especial regard to the days in Houston County his daughter wrote: "I am sorry that years ago I did not write down the tales Father often told of his trips and experiences. Of course, he was the old type of family doctor we hear so much about now. He was a very skillful surgeon and was proud of his record of not losing cases from infection as was so common in the early days of medicine. He had a fine library, read the medical journals, went to conventions and kept abreast of the times until his health began to fail. In those days in Houston there were no nurses or hospitals. One wonders how surgery could have been successful."

And from his son came the following lines: "Dr. H. P. Johnson has been a most successful, aggressive individual, both in medical practice and in all his activities. He had just begun a biography of his most interesting career when the infirmities of age stepped in and destroyed the only source of record of this vast medical and human experience."

In frail health during his last few years, Dr. Henry Porter Johnson died in Fairmont on March 31, 1943.

Edmund Burke Johnston, a younger brother of Dr. Henry P. Johnson (as noted previously, both spellings of the surname are correct), was born on March 11, 1862, at the farm home of the family at Pleasant Hill, Fremont Township, Winona County, Minnesota, the son of David Johnson, a farmer of English descent who was born in New Hampshire, and Almira Corey Johnson, of English and Scotch ancestry. Almira Corey was born at Belchester, Massachusetts, the daughter of Alpheus P. Corey, a Baptist minister and cobbler. Some of her forebears fought in the American Revolution; others of them founded the Monroe Tavern at Lexington, Massachusetts, which in recent years has been a historical museum.

Of all of the eight brothers and sisters of Edmund Johnston, data is not at hand, but it is known that Willis when a young man went to Kansas and was carrying mail there when the country was a wild frontier. Augustus died in infancy. Jabez in his earlier years taught school and in later life made his home at Madison, Wisconsin. David lived at White Rock, South Dakota, and at one time was a member of the state legislature.

The young Edmund B. Johnston went to Boynton Corners school and to the Mann school near his farm home in Winona County. For a year or two he was a student at the State Normal School at Winona, although not a graduate, and subsequently he taught school in Montana and in Yucatan, Houston County, Minnesota. In September, 1888, he entered Rush Medical College, as his brother Henry had done ten years earlier, and in 1889 he received his degree. After further study at the Jefferson Medical College in Philadelphia he returned to Minnesota and in 1893 first practiced medicine in the community of Hokah, in Houston County. There he met and married his first wife, Alice L. Dunham. The only child of this marriage, Ned Johnston, became a railroad employe and a minister of the church of Latter Day Saints. Some years later Dr. Johnston was married to Effie Sinclair, of Money Creek, Houston County, who had been a teacher in Lanesboro and Rushford, Fillmore County. Of the three children of the second marriage, one died in infancy. The others, Esther Johnston Sather and Stanley Johnston, both of them teachers (Mrs. Sather before her marriage), were living in 1942.

From Hokah, Dr. Johnston moved to Caledonia, where he built up a large practice and continued to grow in the esteem of the community. After 1896 he went to Fairmont, for three years to be associated with Dr. Henry P. Johnson, who bought his brother's practice when Dr. E. B. Johnston decided to practice in Benson. After the years in Benson, Dr. Johnston followed his profession in Donnelly and Wheaton, where he was living when these notes were compiled. He not only has practiced medicine successfully but also has engaged in farming, stock breeding and poultry raising, pursuits which he has regarded as side lines or hobbies.

Harvey B. Laflin was one of the early physicians in and near Caledonia, Houston County. The only definite information about him that has been gleaned is that he served as county coroner from January 1, 1860, to January 7, 1862, and again from May 13, 1862, to January 9, 1863; and that he practiced medicine in the township contemporaneously with Drs. O'Connor, Dustin, and McKenna. Some of the earliest settlers in the county were the Laflin family, of Winnebago Township, and it is possible that they and Dr. Laflin were related. A note about Eliakim Laflin was included in the narrative that precedes these biographical notes.

John Byers LeBlond, who was born at Celina, Ohio, probably about 1824, arrived in Brownsville, one of the oldest of Mississippi River towns in southern Minnesota and the port of greatest and most diversified activity, in 1856 or 1857, as nearly as can be determined. He had been graduated from the Willoughby Medical College, State of Ohio, in March, 1848, and was both physician and druggist. Young, ambitious, apparently well trained for that period, Dr. LeBlond entered early into the activities in civic, educational, medical and military affairs, of the new county and the territory, soon to be a state.

Although it has been variously stated that this pioneer physician came to Brownsville in 1860 or 1862, it is obvious that he became established there several years earlier, because in 1857 and 1858 he was one of the three who were elected to represent the region, then the tenth district, in the state senate. When, in the apportionment of 1860, Houston County was placed in the thirteenth district, he went to the legislature as a representative and in the following year served a second term.

Dr. LeBlond's career was interrupted by the Civil War. In 1862 he joined the First Volunteer Regiment of Minnesota with which he served as assistant surgeon, succeeding Dr. D. W. Hand, of St. Paul, and later was promoted to first surgeon. He remained with that regiment until the muster out on April 29, 1864, and his honorable discharge on May 5, a week later. A year later he re-entered the army, and when the First Battalion of Minnesota was organized, he was mustered in as surgeon on May 17, 1865. He was mustered out finally on the date, July 14, 1865.

In 1868 Dr. LeBlond was serving as superintendent of schools of Houston County, as well as engaging in medical practice, and there is evidence that at all times he was representative in matters of public health and of organized medicine. In 1869 he became a member of the Minnesota State Medical Society, which was revived in that year after a long period of lying dormant since its organization in 1855. In 1870 he was appointed a member of its Committee on Epidemics, Climatology, and Hygiene and also was chosen as one of its nine delegates to the annual meeting of the American Medical Association. In 1872 he was a member of the Committee on Diseases of the Nervous System and in 1876 of the Committee on Medical Education. Of fraternal bent, when the Brownsville Masonic Lodge No. 73 (A. F. and A. M.) was chartered on January 15, 1869, he was appointed Master. Dr. J. M. Riley, a contemporary in Brownsville, was made Senior Warden.

Sometime in the seventies the first frame house that had been built in Brownsville, in 1850, was remodeled and became the home of Dr. LeBlond and his family. Of Mrs. LeBlond information has not been available. It is interesting to try to imagine what life in the hustling pioneer river town, strung thinly along the narrow ground between the bluff and the water, must have been to her, as the wife of a pioneer physician, and to other women of the little community who brought up their children under conditions of unrest and even danger. Dr. and Mrs. LeBlond had two sons, Horace W. LeBlond (who in 1877 was postmaster at Brownsville) and Clyde LeBlond, both of whom went to Dakota, probably in the late seventies. They were in partnership in a drug store at Chamberlain until Clyde went into newspaper work.

In 1879 or at the beginning of the eighties, when Brownsville's great day had drawn to a close, Dr. LeBlond went to Sioux Falls, Dakota Territory. It was from there, it is believed, that he sent in his last report on diphtheria

in Minnesota from November 1, 1879, to November 1, 1880, to the Minnesota State Board of Health. His name appears in the list of physicians "who, in answer to the circular of the committee, have kindly furnished most of the data for this report" (published in 1881). On the roster of physicians of Dakota, when the medical code of 1869 was replaced by the medical practice law of 1885, appeared the name of J. B. LeBlond, as of June 19, 1885, of Sioux Falls, Minnehaha County.

In Sioux Falls Dr. LeBlond had offices in the Carpenter Hotel Building, and there he continued to practice medicine until his death, which was caused by cardiac disease, in 1893 (?). Not until 1899, however, was his name included in the list of deceased members of the Minnesota State Medical Society, of which, since 1882, he had been an honorary member. He was known as an able practitioner, kindly and generous with his service to the poor. At his funeral there were present many whom he had befriended.

Andreas (Andrew) Pederson Lommen was born on a farm near Spring Grove on May 10, 1867, the son of Mr. and Mrs. Peder Lommen, both natives of Norway, who were among the earliest settlers in the county. His father came to America in 1851, his mother, Maria Arnston, in 1861. Andreas Lommen began his early education in the rural school near his home and later studied at Gales College at Galesville, Wisconsin, for two years. During 1890 and 1891 he taught a country school in Spring Grove Township before beginning the study of medicine. After taking his degree in medicine and surgery at the University of Minnesota in 1895, although certificated in Houston County and although he practiced there to some extent, he resided in Fillmore County and was a leading physician of that county, for two years at Mabel and for forty-five years at Lanesboro. He died at the Veterans' Hospital at Milwaukee, Wisconsin, on September 16, 1942. In notes on the lives of pioneer physicians of Fillmore County there is included fuller comment on Dr. Lommen's career in that region.

Edward MacDonald was graduated from Rush Medical College in 1879. The record available concerning him is extremely scanty. In the Official Register of Physicians of Minnesota (1883-1890) his name appears twice: In the alphabetical section as living in New Albin, Iowa, and as having received Minnesota license No. 1428 (R) on May 28, 1887, and in the section by counties as a resident of Spring Grove, Houston County. It is probable that he was briefly in Houston County and that he settled in Iowa. By 1809 he was living in Cuba, Wisconsin.

Joseph Mark, in 1871 a graduate of the Kownow Medical College in Russia, on October 15, 1883, then a resident of Minneapolis, received certificate No. 166 (R) to practice medicine in Minnesota. At about this time a Dr. Joseph Mark, short and dark-complexioned, believed to have been the same man, set up practice as a physician and surgeon in Caledonia, Houston County, where he remained, according to directories, into 1887. It has been recalled in the village that he was known there to have been duly certificated and that "he didn't stay here very long." In 1896 Dr. J. Mark was in Lyle, Mower County, and subsequently he was in Minneapolis.

Oliver McGuffey perhaps was in the village of Yucatan in the late seventies.

HISTORY OF MEDICINE IN MINNESOTA

William Henry McKenna was born at Wheeling, West Virginia, on May 1, 1843, one of the seven children of William Henry McKenna, native of Ireland, and Mary Ann Quirk McKenna, who was born in Scotland of Scotch-Irish parents. His sisters were Maggie, Kate, Sarah, Alice, and Mary Ann.

He had one brother, Jone. At the time these notes were written none of the family was living.

After completing his preliminary education in the schools of his native town, William H. McKenna studied medicine under the preceptorship of Father Quirk, also of Wheeling. It was on the outbreak of the Civil War, while he was still studying medicine, that he joined the Confederate Army, with which he served as a surgeon until he was taken prisoner at Paris, Kentucky, and sent to Chicago to await an exchange of prisoners. After the close of the war he continued his medical study at Richmond, Virginia, and thereafter, it has been stated, he was delegated by the government to go as a physician into the Northwest.

In 1872 Dr. McKenna took postgraduate work at the Medical School of the University of Michigan at Ann Arbor and at the same time served on the faculty as assistant professor of anatomy. In that year on completion of his work at the university, he obtained his license to practice medicine in Minnesota and settled in Caledonia, Houston County. In this period he was married to Mary Ellen King, a teacher by profession, who was born at Louisville, Kentucky, of Irish parents. Dr. and Mrs. McKenna had four children, Paul, Mayphine, Estella, and Jay.

In Caledonia Dr. McKenna entered into active professional life in the conduct of a widespread practice and in civic responsibility. At one time he was local health officer and for nearly a year, in 1881, he served as coroner of Houston County. It is remembered in the village that he kept a large stable, in order that he might answer calls at all times in all seasons and at the same time protect his unusually fine and beautiful horses, which he cherished, by changing teams every few hours. In later years his elder son Paul accompanied him on his rounds, driving the team.

In 1883 Dr. McKenna moved with his family from Caledonia to Austin, in Mower County, and in that town and community he continued in heavy general practice. An able and ethical physician throughout his career he was identified with medical progress. In Caledonia, as noted, he held professional offices of responsibility. In Austin, he served as city physician. He was a member of the Mower County Medical Society (the Houston County Society, as stated, was not organized until long after he left the county), the Minnesota State Medical Association, and the American Medical Association. He was a member of the Catholic Church and a generous contributor toward charitable and educational institutions. Outside his profession his chief interests lay in farming and in his favorite hobby of fishing.

When Dr. William Henry McKenna died in Austin on April 26, 1932, of coronary disease, he was survived by his sons and daughters. In the early nineteen forties Paul K. McKenna, a physician and surgeon, was in practice at Mount Sterling, Kentucky. Jay K. McKenna, a physician and surgeon, and Mayphine McKenna Graf, and Estella McKenna were in Austin.

Ingvold [sic] Muller, a pharmacist and reputedly a physician, for he was called "doctor," is said to have been a resident of Spring Grove Township beginning in the late fifties.

(To be continued in January, 1946 Issue)

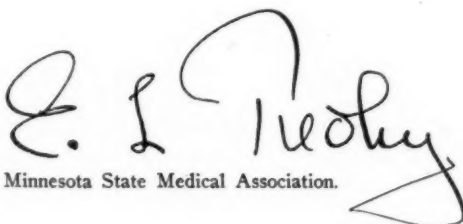
President's Letter

This is your 1945 President's final and farewell letter. Just as I took over from Med. Jones, so I yield to the gifted and gracious Ed. J. Simons of Swanville. I bespeak for him the same generous support from the membership, the committees, and Mr. Rosell's office that has expedited the duties of my interesting year of service.

It is evident that I have no obvious accomplishments to point to; none such was either outlined or contemplated. It is implicit in the purposes of our Association to battle crises, meet stern opposition and yet plead for survival by dint of a service so obvious that the judgment of the just never fails us. I have simply fitted into that progression or profile that, decade by decade, yields the history of our guild in Minnesota. That continuity stems from a coherent and publicly recognized professional group dedicated to the prime purpose of supplying our people with a medical service second to none, which must not deteriorate, come what may. Let war devastate and confuse all normal values; let political opportunists summon all possible critical adjudgments to camouflage their prime purpose—to put us under bureaucratic bondage; let the occasional unwise and injudicious within our ranks display greed, avarice and unethical personal relationships—still there remains so much of zeal for the public weal and love of scientific advancement among us that despite current confusion, the outlook was never so exhilarating or inspiring.

This sounds Churchillian; but it comes from the heart and is (of all expressions) thoroughly non-defeatist. Let us adjust our medical prepayment plan; reinduct our medical Veterans into civil practice; do our share to implement the private hospitals, in which we serve, into the general scope of medical education. Of all fields of professional activity, medicine needs peace most of all.

May the season's appeal—"Peace on earth to men of good will" conceal no demeaning reservations. Hate and healing are incompatible.



President, Minnesota State Medical Association.

Editorial

CARL B. DRAKE, M.D., *Editor*; GEORGE EARL, M.D., HENRY L. ULRICH, M.D., *Associate Editors*

THE NEW WAGNER BILL BACKED BY PRESIDENT TRUMAN

WE HAD been led to believe that there was little danger of the passage of the third Wagner-Murray-Dingell Bill, which had been submitted to Congress early this year. The submission of a new bill on November 19, labeled the National Health Act of 1945, by these same Senators and Congressmen with a message from President Truman requesting its passage came, therefore, as a bombshell.

According to Arthur Sears Henning "The compulsory health insurance plan is chiefly the brain child of Isadore S. Falk, research director of the Social Security Board, and Michael M. Davis, a member of the CIO Political Action Committee." Neither the President nor Mr. Wagner nor the Social Security Board made any attempt to consult representatives of the American Medical Association in regard to the bill. In spite of protestations by the President and Mr. Wagner that the bill does not constitute socialization of the practice of medicine, it would do just that, and is the effort on the part of a socialistically minded minority to force socialism on our country contrary to our Constitution, which guarantees private industry. The placing of American medicine under bureaucratic control in Washington is just the first step in the regimentation of industry, finance and, eventually, labor itself.

The need for governmental assistance in caring for such illnesses as tuberculosis and mental disease has long been recognized by the profession. The Hill-Burton Bill providing for federal subsidy for the construction of hospitals where needed and where funds from private contribution or local taxes cannot provide for such a need has been approved by the profession. Physicians favor increased scientific research in cancer and mental diseases particularly. Two bills for a National Research Foundation are now in Congress. The medical profession realizes the importance of having such a foundation free from political appointments and control. For this rea-

son, the Foundation Bill (S. 1285) seems the more desirable.

The medical profession, like the public in general, favors insurance as a protection against various hazards, the cost of accidents and sickness included. It believes that private insurance against medical cost is the answer. Insurance against hospital costs has grown by leaps and bounds during the past ten years. Progress is being made in the provision of insurance to cover other costs of illness such as doctors' fees. Besides policies provided by insurance companies, the physicians in a number of states and smaller units have organized non-profit corporations to provide such insurance. Lack of experience has made expansion slow, but it has been shown that accurate rates can be determined for surgical procedures and obstetrics and certain types of illnesses. Our state committee has been preparing a voluntary prepayment medical insurance organization for Minnesota. The recent approval by the A.M.A. House of Delegates of such an organization on a nationwide basis is the answer of the medical profession to the national need for such insurance.

If a bill similar to the new Wagner-Murray-Dingell Bill is passed, the cost to taxpayers will run into the billions, much of which will be used in administration. The President mentioned a 4 per cent tax on the first \$3,600 earned by an employee. The new bill, however, makes no such mention. Was this omission deliberate so that the measure could be referred to the Senate Committee on Education and Labor, of which Senator Murray is chairman, instead of the Senate Committee on Finance? The cost is sure to be several times the 4 per cent mentioned.

The profession has insisted on the right of an American citizen to free choice of physician. Many, while insisting on such right as far as they are concerned, voice the opinion that this is not so important for the other fellow. We predict that many and perhaps most of the profession would exert their right under the proposed bill to refuse to participate. Individuals who make use of the

services of such physicians will therefore pay taxes from which they will derive no benefit.

The medical profession is convinced that a healthy development of volunteer prepayment medical insurance rather than the proposed compulsory governmental plan, which is sure to prove a costly experiment, is the answer to the admitted need for such insurance.

HOSPITAL NEEDS IN COUNTRY DISTRICTS

THE provision of effective medical care in the more sparsely settled areas of our country has long been a problem and continues to be one, although the advent of the automobile and good roads has changed the picture of early days in certain areas. Nevertheless, the problem still exists, and the solution is not simple.

The young medical graduate is inclined to locate in the more thickly settled areas where hospitals are available. The hospital provides laboratory aids and furthers medical consultation, both of which promote better medical practice. On the other hand, the mere construction of hospitals in the absence of medical and technical personnel would be an economic waste. And there, as we see it, lies the crux of the problem.

Heretofore, when a group of physicians felt the need for a hospital, funds have been collected by popular subscription and a hospital built. Too often the hospital has failed to meet expenses and has eventually ceased operation. It is to meet the hospital needs of communities which are unable to finance hospital construction and perhaps maintenance, either by popular subscription or local taxation, that the Hill Burton Hospital Construction Bill was submitted to Congress and approved by the medical profession. The revised bill (5191) has been approved,* apparently after considerable study, by the Senate Committee on Education and Labor. Revisions rightly include certain limitations on the funds to be made available and rather surprisingly eliminate "and medical care" from the definition of the term "public health center" in the original bill as "a publicly owned facility for the provision of public health services and medical care." Are these public health centers to be constructed in sparsely settled areas to be devoted to public health alone and no medical care whatever?

It would seem obvious that the need in sparsely settled areas is for a certain type of hospital to provide for at least obstetrical care, injuries, and emergency operations such as the general practitioner would handle and not complicated procedures which would require the services of a specialist. The facilities of the larger centers would be the logical place for the handling of such needs. We doubt whether the limitation of such centers to public health would meet the need. Those of our readers located in sparsely settled districts in the state who know from personal experience what the needs are might submit their ideas for the information of their urban confreres. We would welcome their communications.

According to the revised bill, responsibility in carrying out the provisions of the bill are placed in the hands of the Surgeon General of the U. S. Public Health Service and the Federal Hospital Council, the latter to be more than advisory and to share responsibility in determining the number and general manner of distribution of hospitals to be constructed under the state plans. In the actual determination of local needs for federal assistance in hospital construction, great care will be required to avoid gross extravagance in the form of unnecessary hospital construction. A council located in Washington would be at a handicap in determining local needs. Even state supervision, while in a better position to evaluate local needs, would be subject to local pressure groups which could lead to useless hospital construction.



*they cost so little
and do so much—
have you paid
for yours?*

*Editorial: The Hill Burton Hospital Construction Bill, J.A.M.A., 129:804, (Nov. 17) 1945.

MEDICAL ECONOMICS

Edited by the Committee on Medical Economics
of the

Minnesota State Medical Association

George Earl, M.D., Chairman

NORTH CENTRAL STATES DISCUSS MEDICAL ECONOMIC PROBLEMS

Discussions at the North Central Medical Conference which was held in Saint Paul on November 11, clearly demonstrated that physicians in this area are much occupied with the medical economic problems facing organized medicine today and that words are being converted into action to meet these problems.

Long-range planning for adequate hospital facilities, adequate medical service in rural areas, educational and establishment opportunities for medical officers, prepaid medical service plans and effects of pending national legislation all ran the gamut of thorough perusal by the speakers and general discussions interspersed throughout the morning and afternoon sessions.

Washington Office Shows Growing Influence

The delegates heard a firsthand report from Dr. Joseph S. Lawrence of the work being done by the Washington Office of the Council on Medical Service and Public Relations. Dr. Lawrence told of the growing interest in this office in Washington as evidenced by increased requests for consultation and information by both congressmen and officials of government bureaus. The most effective way for physicians not only to temper but enlighten congressional thinking on medical and health issues, Dr. Lawrence asserted, is to maintain close contact with them.

Farm Leaders Offer Suggestions

Mr. J. S. Jones, Executive Secretary of the Minnesota Farm Bureau Federation, who has long been an ardent advocate of improved medical practices and facilities to better the general health of rural people, assured the delegates of the co-operative attitude that farm groups are evincing toward the medical profession. As a representative of two national committees on rural

medical care, he outlined the vast amount of research that is being undertaken to work out a solution for the inequalities that prevail in the standards of medical service rendered in many communities. Many rural leaders are tackling the problem in their home states by gathering data through their local county units to chart the course toward which specific improvement should be aimed, he said.

Rural people, according to Mr. Jones, want no trafficking with the Wagner-Murray brand of legislation. On the other hand, voluntary prepaid medical service plans are very much in the scheme of their thinking and they are looking to the medical profession to effect such a program on a national basis with the co-operation of farm and other lay groups.

The following seven proposals, Mr. Jones stated, had been presented and fully approved at a joint meeting held in Chicago in July of the Rural Medical Service Committee of the American Farm Bureau Federation and representatives of the American Medical Association.

1. That the American Medical Association endeavor to have state medical associations cultivate better working relationships with the state farm bureaus.
2. That all committees, national, state or community, selected or appointed concerning state health activities, have qualified farmer representatives included.
3. Work with medical profession in combating socialized medicine by promoting an aggressive, constructive program.
4. Determine the need on factual basis, after thorough consideration and research, of the need for hospital and medical services with particular reference to rural areas.
5. That the American Farm Bureau Federa-

tion and the state federations be leaders in working out plans for wise, effective use of public funds for improvement of public health with emphasis on local participation and local control.

6. That some plan be worked out for providing scholarships or loan funds for worthy rural youth to make it possible for them to study medicine with or without agreement to return to the country for practice. Interstate collaboration in medical education of students from states in which there is no medical school.

7. The development of prepaid medical and hospital care on a sound actuarial basis without subsidy is urged, as one of the problems in medical care for rural people is payment.

National Voluntary Insurance Plan Proposed

Conference members were interested, also, in remarks by Dr. A. W. Adson of Rochester, Minnesota, representing the Council on Medical Service and Public Relations. Dr. Adson told of the conviction held by physicians from 35 states, who attended a public relations conference of the Council in Chicago October 19 and 20, that there was definite need for some national voluntary medical service plan to become operative in all the states. This conviction has grown from the realization that with plans now operative in some twenty-one states, subscribers to these plans, since their inception in 1917, still number only six per cent of the total population of the country. To forestall and eliminate the dangers of federal control of medical practice, immediate efforts must be made to have a larger proportion of the population insured under prepayment plans, and this, in the opinion held in many quarters, can be accomplished only through an over-all national plan into which the various state plans can be integrated.

For the purpose of forming the nucleus for development of such a program on a national basis, Dr. Adson told the confreres of another meeting that will be called just prior to the House of Delegates' meeting on December 3 at which time specific resolutions will be presented.

"People Want Health Insurance"

Significant remarks, also, were made by Mr. Jay C. Ketchum, Executive Vice President of Michigan Medical Service. To quote Mr. Ketchum briefly:

"People have not thought of doctors as being particularly interested in medical economics," Mr. Ketchum said. "Almost automatically they look to Washington, rather than the doctor, for balm for their economic woes. A fact that politicians have carefully avoided mentioning is that people do not know it is possible to provide a health care program under anything other than government auspices."

"True enough, the people want health insurance. They are still thinking of it, however, as something that only government can provide. They have yet to learn that doctors can provide a 'health insurance' which government can never match."

Pointing to the successful operation of Michigan's Medical Service Plan, which has enrolled one out of every six persons in the state in a matter of five years, Mr. Ketchum said in conclusion: "A going medical service plan is a public demonstration of what the medical profession can do in this respect. It is action rather than words, and it is mighty convincing action. It is, in other words, perhaps one of the best public relations programs which the medical profession of any area could possibly devise."

WISCONSIN AND IOWA LAUNCH STATE MEDICAL CARE PLANS

During the past year, prepaid medical service plans have been launched in two of the North Central Conference states, Iowa and Wisconsin.

The newly announced Wisconsin Plan differs from that of its neighboring state Michigan in that it will be sold through a number of insurance companies on an identical basis instead of through the Blue Cross as is the case in Michigan.

While all insurance companies licensed to write health and accident coverage in Wisconsin are eligible to participate in the program, thus far eight companies have definitely committed themselves to participation under the terms of the policy, which must be used without modification, drafted by the Wisconsin State Medical Society.

Complete surgical coverage to employees, with dependents, having an income of less than \$2,600 a year and to single employees, having an income of less than \$2,080 a year, will be granted. For those having higher incomes the same benefits will apply although the physicians do not guarantee that such payments constitute payment in full.

Individuals and their families can purchase this protection through group insurance for groups of ten or more, franchise insurance for groups of three or more, or through individual policies.

The basic group rates for the insurance covered

by the plan will be \$1 per month for an individual; \$3.90 for man and wife; and \$4.75 for full family coverage, as determined by the group insured. It is anticipated that the plan will be put into effect shortly after the first of the year.

Iowa Medical Service, organized in July, 1945, is now in the process of enrolling subscribers. This differs from the Wisconsin plan in that it offers medical as well as surgical and obstetrical service in the hospital with the medical service limited to twenty-one days.

VA MEDICAL STAFF TO AIM AT SPECIALIZATION

General Omar N. Bradley, Veterans' Administrator, discussed in Washington recently with medical authorities a tentative proposal to institute the highest type of specialized training for key members of the medical staff of the Veterans' Administration facilities. The proposal grew out of discussions between Dr. L. G. Rowntree, Chairman of the American Legion's rehabilitation committee, and authorities of the University of Minnesota, the Graduate School of Medicine, the Mayo Clinic and Mayo Foundation based on a recommendation originally made by the Minnesota department of the Legion.

These officials, Dr. Rowntree reported to General Bradley, expressed a willingness to co-operate in a plan whereby Veterans' Administration physicians and surgeons might receive opportunity to take postgraduate work in special or advanced training. The possibility also was discussed of working into the plan some arrangement for short, intensive special courses of training.

While the program is tentative until it is further explored by General Bradley and the Veterans' Administration, it is believed to be the first concrete suggestion for introducing specialization into the career medical service of the Veterans' Administration. If it is successful, it can be adapted to virtually every state with a postgraduate medical school.

RECONVERSION OF 9-9-9 PROGRAM

A directive recently issued by the Procurement and Assignment Service outlines the method whereby hospitals are to begin immediately to supply their resident quotas from the ranks of medical officers who have been on active duty.

Commissioned officers serving as residents at present are to be called to active duty as rapidly as possible, in no case later than April 1, 1946, except in a few rare instances where it is proven that a hospital, after exhausting every effort, was unable to secure a veteran.

Hospitals are directed to begin at once to appoint veterans to every staff position so that as soon as they have been adequately trained to replace commissioned officer residents, the latter can be called to active duty at once without regard to whether they have completed the full term of their present deferment.

It is pointed out by PAS that for the present, at least, veterans will not count in hospital quotas so it will be of great advantage to hospitals to accept veterans as replacements for the officers who do count in quotas. By instituting the program promptly, hospitals will also be in the advantageous position of having residents who are orientated to their positions by the time they will be practically the sole source of resident supply for civilian hospitals.

In a case where a hospital desires the services of an officer on active duty in the army to replace a deferred commissioned resident, the Surgeon General of the Army will give prompt and favorable consideration to this request provided the officer has been on active duty for two years or more, is stationed within continental United States and has indicated that he will accept the appointment. This replacement possibility does not extend to officers on duty with the navy.

Commissioned officers completing hospital services between January 1 and July 1, 1946 (excluding those officers whose present term expires April 1, 1946) will be called to active duty at the date of the termination of these services unless they have previously been replaced by veterans and with a few rare exceptions where special requests are made and granted after careful review by the Procurement and Assignment Service and the Surgeon General of the Army.

For those commissioned officers whose present term terminates on April 1, 1946, the reconversion from the 9-9-9 program to a peacetime twelve-month service will be conducted in accordance with the following plan:

A. Each commissioned officer who is an intern terminating his nine months of internship on April 1, 1946 will continue in his present internship until July 1, 1946, with a few exceptions.

B. Each commissioned officer who is a junior resident terminating his junior residency on April 1 (if he has not already been replaced by a veteran prior to April 1) will be called to active duty on April 1 except in rare cases where an extension may be granted to July 1, 1946.

C. Each commissioned officer who is a senior resident and who is completing his twenty-seven months of service in a hospital following graduation will be called to active duty on or about April 1, 1946, if not replaced prior to that date by a veteran.

D. Senior students who graduate on or about April 1, 1946, are to be accepted for internship on that date. This new group of interns will be allowed to serve internships until July 1, 1947.

The directive emphasizes the necessity of re-converting from the 9-9-9 Program as rapidly as possible and returning to the July to July twelve-month internship this coming year.

To insure adequate distribution of the available supply of veterans, hospitals are urged not to fill their house staffs out of proportion to their present quotas, but to concentrate first on replacements.

MINNESOTA STATE BOARD OF MEDICAL EXAMINERS

Julian F. Dubois, M.D., Secretary

Itinerant Health Lecturer Discontinues Activities After Warning From Ramsey County Attorney

Re: Bradford Dorr, also known as Bryan Ripley Dorr

On November 5, 1945, Bradford Dorr, sixty-four years of age, discontinued his health course activities and checked out of the Saint Paul Hotel, Saint Paul, Minnesota, after having been warned, on November 2, 1945, by Mr. James F. Lynch, County Attorney of Ramsey County, Minnesota, that if he continued his activities he would be prosecuted for an alleged violation of the Minnesota Basic Science Law.

Dorr, also known as Bryan Ripley Dorr, had sent out hundreds of letters soliciting individuals in Saint Paul to take a course at \$100 per person. In one of Dorr's circulars he stated that he was able to "arrest certain heart, circulatory, kidney, liver, stomach and intestinal diseases." As an introduction to the letter Dorr stated that he was born in Saint Paul and that his father Russell R. Dorr was the founder and one of the presidents of a well-known Saint Paul insurance company. He also stated that his mother had been a president of the Shubert Club and the founder and national president of a musical organization.

When Dorr's activities became known to the Minnesota State Board of Medical Examiners an investigation was immediately commenced and it was learned that Dorr had previously been at the Hotel Schroeder, Milwaukee, Wisconsin, and before that had operated in Chicago, Pittsburgh, New York City and other places. Dorr

admitted at the conference in the County Attorney's office where Dorr was represented by legal counsel, that he employed diet and exercise in his course. He also admitted that he had given a statement under date of May 26, 1943, to the Better Business Bureau of New York City containing the following:

"My services consist in improving physical condition through exercise, diet, and vitamins, and also, subject to the prescription and supervision of physicians, the relief of certain symptoms of rheumatism, sciatica, arthritis, lumbago, gout, bursitis, neuritis and neuralgia through therapy, and in particular, short wave diathermy, sinusoidal, faradic and galvanic currents, ultraviolet and infrared rays, vapor cabinet baths, and colonic irrigations."

Dorr also admitted that he had no license to practice any form of healing in the State of Minnesota, nor anywhere else. According to Dorr he has not lived in Saint Paul for many years. Dorr represented himself as, holding an A.B. degree, a member of Phi Beta Kappa, a graduate of Williams in 1902, and to have attended the Harvard University Graduate School of Business Administration. He is an exponent of the so-called Hollyouth Method which he claims to be "the only short-cut to the Fountain of Youth." According to the records at Harvard, Bradford Dorr was a part-time special student in the academic year 1926-1927 being enrolled in the course in Accounting Principles, Business Statistics and Finance. During the academic year 1927-1928 Bradford Dorr enrolled in the same school in the course in Corporation Finance. It is the claim of the Minnesota State Board of Medical Examiners and the County Attorney of Ramsey County, that Dorr's activities are clearly beyond the law of the State of Minnesota. The Supreme Court of Minnesota has ruled that:

"Advising the subscriber for a fee as to certain improved habits of diet, exercise, or living, although not accompanied by any medical prescription or treatment, is a violation of Section 5717 (Medical Practice Act)."

Minneapolis Couple Convicted of Criminal Abortion

Re: State of Minnesota vs. James Lloyd Beckman

Re: State of Minnesota vs. Marilyn DeVerrel Beckman

On November 7, 1945, James Lloyd Beckman, thirty-two years of age, 3425 Portland Avenue, Minneapolis, entered a plea of guilty in the District Court of Hennepin County, to an information charging him with the crime of abortion. Beckman, who has three previous convictions for forgery in the second degree, failing to keep his local draft board advised as to his whereabouts and failing to report for induction under the Selective Service Act, was sentenced by the Hon. Frank E. Reed, Judge of the District Court, to a term of three years at hard labor in the State Prison at Stillwater. Beckman holds no license to practice any form of healing in Minnesota, and gave his occupation to the Court as a teacher of ice skating and a commercial artist.

On November 19, Beckman's wife, Marilyn DeVerrel Beckman, thirty-five years of age, also entered a plea of guilty in the District Court of Hennepin County, to an information charging her with the crime of abortion. Mrs. Beckman was sentenced by Judge Reed to a term of not to exceed four years in the Woman's Reformatory at Shakopee, the Court providing, however, that the first year of Mrs. Beckman's sentence shall be served in the Minneapolis Woman's Detention Home and that Mrs. Beckman shall then be placed on probation for a period of three years.

Following a joint investigation by the Minnesota State Board of Medical Examiners and the Minneapolis Police Department, evidence was obtained indicating that Beckman and his wife were engaged in

MEDICAL ECONOMICS

doing numerous criminal abortions for which they were being paid as high as \$300 an abortion. The evidence also disclosed that Beckman and his wife had obtained \$1,050 in a period of twenty-nine days prior to their arrest, for doing 4 criminal abortions. Prior to being sentenced, Mrs. Beckman admitted under oath in Court that she had been engaged in doing criminal abortions for "several years." Mrs. Beckman stated that she married her present husband on August 20, 1945, and prior to that time was married to Frank J. Brady, who has a long criminal record in Minnesota for grand larceny, manslaughter and practicing healing without a Basic Science Certificate. Mrs. Beckman also stated during the investigation that she studied massage for three months in 1940 at the Chicago College of Swedish Massage. She claims that she paid \$100 for the course and that she received a diploma in massage and physiotherapy. She stated that she also attended the Minnesota Chiropractic College in Minneapolis for about eighteen months commencing in 1941, and that she paid \$20.00 per month for the course but never finished it. Mrs. Beckman stated that she was born in Vancouver, British Columbia, of American parents. She had no license to practice any form of healing in Minnesota nor anywhere else.

Duluth Quack Pleads Guilty at Minneapolis

Re: State of Minnesota vs. "Dr." Alfred Peterson

On November 26, 1945, Alfred Peterson, fifty-five years of age, 3718 West 4th St., Duluth, Minnesota, entered a plea of guilty in the District Court of Hennepin County to an information charging him with the crime of practicing healing without a basic science certificate. Peterson was arrested at the Nicollet Hotel, Minneapolis, on November 20, 1945, following an investigation by the Minnesota State Board of Medical Examiners and the Minneapolis Police Department. The investigation disclosed that Peterson, who claims to have studied chiropractic but holds no license to practice any form of healing in Minnesota, was making regular trips to Virginia, Hibbing, Grand Rapids, Brainerd, St. Cloud, Mora, Cambridge and Minneapolis. Peterson would interview patients at a hotel in each of the cities visited. In his literature he claimed to have

"discovered a cure for heart trouble—gall stones—ulcers—eczema—rheumatism—sinus, and that dreaded disease C-A-N-C-E-R."

In his literature Peterson also stated:

"I will give \$1,000.00 to any Medical Association, any cancer research institution, or any one if they can prove that these testimonials are not true."

On one of his recent trips to Mora, Minnesota, Peterson made the mistake of furnishing the same medication to seven patients, with seven different ailments. One of the patients stated that she paid Peterson \$6.00 and her suspicions were aroused because the other patients received the same medication, notwithstanding their different ailments. It was then learned that Peterson would be at the Nicollet Hotel on November 20, to receive patients. He was greeted by Inspector Bernath of the Minneapolis Police Department who placed him under arrest and seized a suitcase full of medicinal preparations. Peterson at first claimed that he was a Divine healer but quickly abandoned that pretext when he was asked to explain the presence of the suitcase full of medicine. Peterson claims to have a chiropractic license in Tennessee.

Following a statement of the facts to the Court, Judge Frank E. Reed sentenced Peterson to a term of one year in the Minneapolis Workhouse and stayed the sentence for one year on condition that Peterson surrender his medicines to be destroyed by the State and

that he refrain from practicing healing in any manner anywhere in the State of Minnesota. Peterson agreed to this in open Court. Peterson was represented by Mr. Marshall S. Snyder, attorney at law, Minneapolis, who stated to the Court that he had advised Peterson that he was clearly violating the medical laws of Minnesota. The Minnesota State Board of Medical Examiners desires to point out that the conviction of Peterson marks the successful prosecution of ten persons in Minneapolis since July 1, 1945. The cases involved practicing healing without a basic science certificate, fraudulent advertising, and criminal abortion. These results could not have been achieved had it not been for the splendid co-operation of the Minneapolis Police Department and the Hennepin County Attorney's office, under Chief of Police Ed. Ryan, Inspector of Detectives, Eugene Bernath, Michael J. Dillon, County Attorney, and Otto Morck, First Assistant County Attorney, respectively.

Minneapolis Woman Barber Pleads Guilty to Violating Basic Science Law

Re: State of Minnesota vs. Anna Christina (Olson) Steele

On October 29, 1945, Mrs. Anna Christina (Olson) Steele, fifty-one years of age, residing at 2705 Colfax Ave. So., Minneapolis, entered a plea of guilty in the District Court of Hennepin County, to an information charging her with the crime of practicing healing without a Basic Science Certificate. After a statement of the facts to the Court, the defendant was sentenced by the Hon. Edward A. Montgomery, Judge of the District Court, to pay a fine of \$50.00 or to serve thirty days in the Minneapolis Workhouse. The defendant paid the fine.

Mrs. Steele, a licensed barber, was arrested on October 11, 1945, by police officers under the direction of Inspector Bernath of the Minneapolis Police Department, on the second floor at 126 So. 3rd St., where the defendant operated the Windsor Baths. The investigation by the police officers disclosed that the defendant had two rooms equipped for the giving of a so-called cabinet bath and massage. The defendant, also, had an infrared lamp and a mechanical massager. The police officers also found three partially filled bottles of whiskey in the massage parlor operated by the defendant. Mrs. Steele represented herself as a masseuse although she holds no license to practice any form of healing in Minnesota. A one-chair barber shop is operated in connection with the Windsor Baths but no sign on the outer door indicated that a barber shop was present at that address. Mrs. Steele denied any interest in the barber shop and the woman operating the barber shop, likewise, disclaimed any interest in the bath and massage parlor.

PARAPLEGIC PATIENTS TO RETAIN ESSENTIAL EQUIPMENT

Permanently disabled patients, upon their discharge from Army hospitals, may retain any appliances then in their use, which are necessary for their comfort and safety, according to a recent War Department bulletin.

Issued especially for the benefit of paraplegic patients (those suffering paralysis of the lower half of the body on both sides) the bulletin specifies that hospital equipment which is classified as non-expendable may be issued upon the authority of the bulletin, and expendable equipment may be issued to these patients at the discretion of the commanding officer of the hospital. Some of the equipment listed includes adjustable hospital beds, Balkan frames, invalid chairs, and innerspring mattresses and covers. No reimbursement is required of the patient.

Minneapolis Surgical Society

Stated Meeting held May 3, 1945

The President, Daniel MacDonald, M.D., in the Chair

CARCINOMA OF THE ESOPHAGUS

THOMAS J. KINSELLA, M.D.
Minneapolis, Minnesota

Perhaps this subject is of no great interest to many of you, but it is a field which is not well understood and certainly one which is inadequately treated at the present time.

Carcinoma of the esophagus constitutes 5 to 7 per cent of all carcinomata and causes about 40 per cent of all difficulty in swallowing. It is five times as common in men as in women and rarely is encountered under the age of forty. The majority of cases are seen in the fifth decade. It rarely occurs in association with inflammatory or other disease. It is almost unheard of in sword swallows or in patients who over a long period of time have passed a large stomach tube at frequent intervals, so the factor of local mechanical trauma probably is not important. Approximately one-half of the tumors in males are found in the lower third or cardiac end of the esophagus while in women nearly one-half occur in the pharyngeal end.

Pathologically, contrary to the popular impression, these lesions are rather highly malignant, most of them grade three and four of Broder's classification and very few of grade one or two. Most of them are of the squamous cell type, although an adenocarcinoma may develop from islands of gastric mucosa in the lower third. The majority of the adenocarcinomas found in this region are really high gastric tumors which have extended upwards. The lymphatic supply about the esophagus is very rich, favoring early metastasis. High lesions metastasize to the nodes of the neck, those of the middle third to the nodes about the bronchi, while those of the lower portion frequently extend to the nodes along the lesser curvature of the stomach and into the liver. Mid-esophageal lesions may by direct extension involve the adjacent trachea or bronchus and produce a fistula.

Symptoms vary widely according to location and metastases. A common history is for a laborer in his fifties, an alcoholic with poor teeth, to have difficulty in swallowing a large poorly chewed bolus of food which sticks on the way down and is finally forced or worked through after some effort. Rendered a little cautious by this experience, he then chews his food more carefully and has no difficulty for a month or two or more, when the episode is repeated, this time with less provocation. Gradually the trouble with solid food becomes more frequent. He loses his appetite and weight as he eliminates one food after another from his diet. Eventually trouble with soft and even liquid food follows. This history of trouble with solids first and later with liquids

is characteristic of increasing mechanical obstruction such as carcinoma produces in contradistinction to the so-called cardiospasm in which trouble with liquids occurs first.

Because of its insidious onset, there is usually a delay of several months between the onset of symptoms and the first report to the physician for examination. Eventually complete obstruction occurs and no food or liquid can be taken. Pain is a late symptom from involvement of the pleura, vagal branches or from mediastinal infection. Involvement of the phrenic nerve may produce hiccough or diaphragmatic paralysis. Metastases in the mid-thoracic region may interrupt one of the recurrent nerves and produce voice changes. Hemorrhage in late lesions occurs not infrequently and may be fatal. Death usually results from starvation, cachexia or some intercurrent infection.

The history as outlined above is suggestive only, but without confirmation does not make the diagnosis. The finding of a hard node in the cervical region suggests malignancy with the esophagus as a possible source. The passage of a sound over a string will localize the obstruction and may by tactile sense suggest malignancy, but unless a piece of tissue suitable for biopsy adheres to the guide, it does not prove the diagnosis. X-ray studies of the esophagus with barium do localize the obstruction and may establish the diagnosis but are subject to certain errors, as carcinoma may present a smooth surface suggestive of benign stricture, while retained food or other foreign body may give an irregular appearance suggestive of carcinoma to a benign inflammatory stricture. Esophagoscopy with direct visualization of the tumor is of great value in ruling out foreign body and extrinsic pressure stenosis and permits direct biopsy of tissue to confirm the diagnosis of malignancy. The biopsy if positive absolutely establishes the diagnosis, but if negative does not rule out carcinoma as perhaps 25 per cent of biopsy specimens fail to show tumor even in positive cases because of inflammatory changes and other factors.

Carcinoma of the esophagus must be differentiated from cardiospasm, foreign body, inflammatory stricture, diverticulum, extrinsic compression of esophagus and perforating carcinoma of the bronchus. The long history of trouble, the age group, the difficulty with liquids first, the marked esophageal dilatation together with the findings on the passage of sounds and the esophagoscope serve to differentiate the so-called cardiospasm. The presence of food or foreign material, or actual ulceration in a large dilated esophagus, may confuse the diagnosis. Care must be exercised at times in cases of diverticulum (not the pharyngeal type) to be certain that it does not represent merely a dilatation above an obstructing carcinoma. The history is very important in cases

of foreign body and inflammatory stricture or stenosis. Bronchiogenic carcinoma may at times invade and perforate the esophagus causing obstruction and dysphagia, but the reverse of this situation occurs far more frequently.

Anorexia, slow starvation and cachexia are constant findings as the disease progresses. Ulceration and perforation of the trachea or adjacent bronchus is a not infrequent complication of carcinoma of the mid-esophagus producing cough and secondary pulmonary changes from aspiration of food. Ulceration and hemorrhage even exsanguinating in degree, is not a rare late event. Perforation and mediastinal infection may be spontaneous or may follow manipulation in the presence of carcinoma of the esophagus. Direct invasion of any adjacent structure as aorta, nerve trunks, pleura or pericardium may occur.

Treatment

Treatment may be palliative or curative. In a palliative way several things besides mere symptomatic treatment may be done to make life a little more bearable for these patients. Control of diet, addition of fluids, vitamins, et cetera, may add to the individual's comfort. Dilatation of the obstructing tumor by means of a bougie over a string to 30 to 45 French at intervals to keep a food passage open will help about 90 per cent of patients and permit them to take sufficient food to maintain nutrition fairly well until late in the disease when metastases are ending the picture. Dilatation without a string as a guide should never be attempted because of the danger of perforation. Any dilatation carries with it about 2 per cent mortality from traumatic perforation and secondary mediastinitis.

The use of an indwelling nasal feeding tube has little if anything to add to dilatation. The Souttar indwelling esophageal tube has not proven appreciably better than dilatation and has not prevented progressive obstruction. X-ray and radium implantation have at times relieved and temporarily slowed up the obstructing lesion. Gastrostomy as a palliative measure may aid in maintaining nutrition but probably does not prolong life. If performed early the risk is not great but if attempted late carries with it a mortality of from 10 to 50 per cent.

The possibilities of surgical excision of esophageal carcinoma has long intrigued the surgeon, but for many years technical and anesthetic difficulties prevented any great progress in this field. It is only since marked advances have been made in anesthesia and thoracic surgery that attention has again been directed toward this lesion. The first successful treatment of esophageal carcinoma was apparently that of F. Torek who in 1913 excised the entire esophagus for a carcinoma of the middle third, closing the cardia and bringing the segment above the tumor out through a cervical incision, implanting it under the skin of the upper thorax. This was then connected by means of a rubber tube with a gastrostomy stoma. This patient survived for fourteen years and then died of another cause. Later surgeons have substituted Gilles skin tubes, loops of jejunum and tubes fashioned from the stomach for the rubber tube with varying success.

Lesions of the upper third have been resected with the larynx, creating a permanent tracheotomy and fashioning a skin tube to connect the pharynx with the lower esophagus. A more fertile field for surgical attack is the lesion in the lower third or half of the esophagus where resection and direct anastomosis between the proximal segment and the stomach can be made after splitting the diaphragm and mobilizing the stomach so it may be drawn up into the left pleural cavity. A few surgeons have extended the use of this procedure to even higher lesions, making the anastomosis as high as the arch of the aorta. An excellent report of surgery of this type and of trans-thoracic resection of high gastric carcinoma by Sweet may be found in the March 1945 number of *Annals of Surgery*.

The cases which I wish to discuss this evening were all lesions of the lower third of the esophagus. Six of these, after careful studies, were considered as being early and localized enough to justify exploration. The first of these patients was a man operated upon in 1940 at the Minneapolis General Hospital. He had reported to the dispensary several months previously with a short history of dysphagia. X-ray studies of the esophagus were reported as negative. Esophagoscopy was not carried out. He was requested to return for restudy in four weeks, but failed to report for several months when he was unable to swallow any solid food. X-ray studies demonstrated a short obstruction in the lower third of the esophagus which was proven on biopsy to be a squamous cell carcinoma. A left posterior transthoracic exploration revealed a short non-adherent obstructing mass about 6 centimeters above the diaphragm. There were no enlarged nodes palpable within the chest, and as the local tumor was easily mobilized, it seemed that the condition was favorable for resection until the diaphragm was split and a mass of enlarged nodes found near the pylorus. The chest was closed without attempting resection, and the esophagus later kept open by dilatation over a string. The patient died three months later with extensive lymph node and liver metastases and an unsuspected carcinoma of the kidney. Three other patients have been explored for apparently localized lesions but were found inoperable because of metastases.

Two others have been explored and found resectable. The first of these, operated in January, 1944, was a man of sixty-three, troubled for several years by hypertension, pernicious anemia, and achlorhydria who presented himself with difficulty in swallowing of four months duration. Examination revealed a short squamous cell carcinoma of the lower third of the esophagus. This was exposed through a left posterior transthoracic incision, the diaphragm split, and the chest and abdomen explored for metastases with negative results. The stomach was mobilized after ligation of the left gastric artery and brought into the left pleural cavity. The tumor was resected, a direct end to side anastomosis made and the chest closed after inserting catheters for continuous intrathoracic suction. Convalescence was uneventful and the patient was again able to swallow without difficulty. He has remained without dysphagia since although he is underweight and anemic and has been returned to the

(Continued on Page 1042)

Minnesota Academy of Medicine

Meeting of October 10, 1945

The regular monthly meeting of the Minnesota Academy of Medicine was held at the Town and Country Club on Wednesday evening, October 10, 1945. Dinner was served at 7 o'clock and the meeting was called to order at 8:10 by the president, Dr. A. G. Schulze.

There were forty-five members and nine guests present.

Minutes of the May meeting were read and approved.

Dr. Walter Camp read the following Memorial to Dr. Arthur Edward Smith.

ARTHUR EDWARD SMITH 1879-1945

Dr. Arthur Edward Smith died at Northwestern Hospital on February 16, 1945, at the age of sixty-five. He was born March 1, 1879, at Milwaukee, Wisconsin, and was the son of Rundell and Grace Bemis Smith, of Poughkeepsie, New York.

His preparatory education was at Markham Academy in Wisconsin. He graduated from the Medical School of the University of Minnesota in 1905 and served a two-year internship at Northwestern Hospital, Minneapolis, Minnesota. He became interested in the specialty of ophthalmology and otolaryngology and studied in the Kruckmann Clinic in Berlin and the Dimmer Clinic in Vienna in 1912 and 1913. He attended the University of Vienna Short Courses in his specialty in 1929 and 1933, receiving his graduate certificate at that time.

He was married to Florence Anderson, of Minneapolis, in 1915, who survives him.

Arthur Edward was very much interested in music and was an excellent pianist. His music was not only a pleasure to himself, but was greatly appreciated by his many friends.

He was a 32nd degree Mason, a member of the Sigma Alpha Epsilon Fraternity, the Minneapolis, Minikahda and Automobile Clubs.

Dr. Smith was chief oculist of the Soo Line Railroad, and a member of the American Association of Railroad Surgeons.

He was a Fellow of the American College of Surgeons, and a member of the American Medical Association, Hennepin County Medical Society, the Minnesota Academy of Medicine, and the American and Minnesota Academies of Ophthalmology and Otolaryngology.

Dr. Smith was the author of numerous articles on ophthalmology and translated several German monographs on ophthalmology.

He had a pleasing personality and a very subtle sense of humor and will be greatly missed by all his colleagues and friends.

A motion was carried that this Memorial be spread on the Minutes of the Academy and a copy sent to Mrs. Smith.

The President announced that there would be an election of new members at the November meeting.

The scientific program followed.

Dr. Chatterton, of Saint Paul, gave the following case report, and showed several x-ray films of the case.

OSTEOMYELITIS OF THE LUMBAR VERTEBRAE

CARL C. CHATTERTON, M.D.
Saint Paul, Minnesota

Mr. W. B., Lakefield, Minnesota, consulted me December 1, 1944.

Present Complaint: Backache, severe, aggravated on any motion. It never entirely disappears. He is most comfortable lying down.

History: Late in July while cultivating corn, suddenly without cause he was seized with severe pain in the back. He had to quit work, went to bed, and has not worked since. He felt hot, perspired freely, and was sick at his stomach at the time. The backache has continued in spite of any treatment, and rest in bed is his only relief. Of late, he has been having a fever and the pain is getting worse.

Personal History: No complaint of the various systems. No operations. He suffered from melancholia years ago and was in the hospital for a time. He is married and his wife is well. He has been a farmer all his life. He does not drink milk, but uses it on cereals and in coffee. His cows have not been tested for Bangs' disease.

Examination: The patient, a man, thirty-nine years old, muscular, had an average weight of about 250 pounds. He was definitely suffering. Perspiration stood out on his forehead. He was pale and was sick. On examination, his neck and upper extremities seemed normal. Eyes were normal. Heart tones were normal. He had a pendulous abdomen, not tender. His spine was slightly flexed. There was marked spasm in the sacro-spinal muscles, both sides, and marked limitation of motion in the lumbar spine. Pressure tenderness was present on the left side from ilium to ribs. The legs were blue and cold. Motion was near normal. Patellar reflexes were normal. Achilles jerk was not obtainable on either side. Temperature was 101.5°. Because of his severe pain and condition, he was advised to go to the hospital.

At the hospital his temperature rose to 102°, and continued to rise daily as high as 104.5°. Urine showed a trace of albumin. The hemoglobin was 80 per cent,

leukocyte count 16,700, sedimentation rate 90 mm. in one hour. Blood culture was negative. The Kline and Kolmer were negative. Agglutination tests, typhosus, melitensis abortis, paratyphosus and bacillus tularensis were all negative. Blood culture was negative.

X-ray: X-ray picture showed destructive processes involving the lower surface of the first lumbar vertebra with the disc destroyed and with involvement of the second lumbar; slight suggestion of a left psoas abscess. The radiologist suggested neoplasm, tuberculosis, osteomyelitis, or brucellosis.

Up to this time the treatment had been rest, Buck's extension, and sedatives without relief.

With all tests negative, with the history of acute onset, we feel neoplasm and tuberculosis could be eliminated. The leukocyte count and sedimentation rate with the patient's temperature of 104° and getting definitely worse, we felt pointed to an osteomyelitis. At that time 100,000 units of penicillin were given intravenously and penicillin was continued, 100,000 unit doses daily for the next twelve days. The third day after this treatment, the temperature was normal and continued normal. On the eighth day after admission to the hospital, a plaster of Paris body cast was applied which he wore until January, at which time a Taylor brace was applied which he wore for two months more.

Early in March, 1945, this man was so recovered that he was able to walk about with little pain and he wears his brace only when doing hard physical labor. He has been doing such work as a farmer does all summer, wearing a brace only when he does heavy work.

Discussion

DR. E. A. REGNIER, Minneapolis: I would like to ask Dr. Chatterton if a plaster was applied with the spine in hyperextension. This is a rare disease and I appreciated hearing this report and want to commend Dr. Chatterton on the good result obtained.

DR. A. R. COLVIN, Saint Paul: Dr. Chatterton's case is a very remarkable one; and, in conjunction with the case I wish to report in discussion, furnishes again evidence of the manifold nature of osteomyelitis and of the marked variability of the reaction of bone or, for that matter, of any tissue to infection. Osteomyelitis, because of the possibility of radiographic observation, furnishes us with an opportunity to demonstrate the various grades of infection both in progression and in regression.

A young man, aged seventeen, was admitted to the Ancker Hospital on August 15, 1940, suffering from a painful shoulder joint. His temperature was 103°. A blood culture revealed staphylococcus aureus. He was given sulfathiazole. His temperature remained elevated for ten days and then fell to normal and remained so until his discharge from the hospital on September 18, 1940. In the interval between his discharge from the hospital and his second admission on November 21, 1940, he suffered from pain in the back of a vague and diffuse character, not bad enough to interfere with his activities, including basketball. The pain was exaggerated, however, occasionally by sudden movement. On November 18, 1940, it became suddenly very severe and constant and aggravated by movement of the spine in any direction. On November 20, 1940, he experienced a dull aching pain in the epigastrium, unaccompanied by any digestive disturbances, however. On November 21, 1940, he had some difficulty in standing upright

and was admitted to the hospital, this being two months after the first complaint of pain in the back.

He presented the appearance of extreme suffering and any movement of his trunk caused great pain. There was marked tenderness in the right costovertebral angle. (It may be noted here that he had been sent to the hospital by his family physician with a probable diagnosis of perinephritic abscess.) He had a temperature of 104°, leukocyte count 22,000. A blood culture revealed staphylococcus aureus. Sulfathiazole was given for five days. After four days, his temperature returned to normal and remained so thereafter. A radiograph shows an area of destruction about the size of a pea in the antero-lateral aspect of the tenth dorsal vertebra. On December 7 (sixteen days after admission), he complained of numbness of his feet, and he had urinary incontinence. Thus, the first evidence of involvement of the nervous system was manifest three months after his first complaint of pain in the back. On December 10, 1940, there was complete loss of power of the lower extremities. Sensation was greatly impaired. Beginning December 20, there was a return of motor power, and by February 11, 1941, this was almost normal, with, however, marked spasticity. Improvement continued, and he was discharged October 1, 1941, with seemingly normal power in his lower extremities with, however, marked spasticity. He has been observed at frequent intervals since then. The spasticity has gradually diminished but is still present.

It is remarkable that, with such severe clinical and pathological manifestations in Dr. Chatterton's case, there was no disturbance of function of the spinal cord. And yet, in the case I am reporting in which there was so little bone involvement, paralysis did occur but disappeared in a short time. Interference with cord function could be due to epidural abscess, exudative process with granulation tissue or inflammatory edema. The early disappearance of the paralysis would suggest edema as the cause in the case reported.

That the diagnosis of osteomyelitis of the spine is not always easy is evidenced by the report of 102 cases from the Department of Surgery and Orthopedics of the State University of Iowa. (Jour. of Bone & Joint Surgery, April, 1936.) Confusion existed in nine cases of tuberculosis, two cases of appendicitis, four cases of arthritis of the spine, four cases of pneumonia with empyema, three cases of mediastinal malignancy, three cases of meningitis, one case of sacrolumbar strain, one case of sciatica, and one case of urethral obstruction.

Ramsey Hunt, in the *Medical Record*, April, 1904, says that the real nature of this disease, namely, osteomyelitis of the spine, is often overlooked because of the more manifest complications; in other words, the complication is diagnosed, but the underlying disease is not. The observation of Gowers in 1899, "that acute general external meningitis occurs as a primary disease and may run an intensely rapid course with profuse suppuration between the dura and the bones," must, according to Ramsey Hunt, be changed to say that primary idiopathic suppurative meningitis (epidural abscess) must be regarded rather as being secondary to osteomyelitis of the spine. The variety of conditions mistakenly diagnosed in the Iowa series, involving as it did tissues and organs of wide-spread location and variable character, would suggest the necessity of at least general surgical, orthopedic and neurological collaboration, and very frequently a wise internist might be able to clear the atmosphere.

Dr. Chatterton's case, with a remarkable recovery after the administration of penicillin, and the recovery of my case after the use of sulfathiazole, would seem to revolutionize the treatment. Nevertheless, epidural abscess should always be evacuated surgically, remembering, however, that suppurative and non-suppurative osteomyelitis may exist in the same individual at the same time; one requiring surgery, the other not.

DR. THEODORE SWEETSER, Minneapolis: I would like to mention something in this connection. Over ten years ago at General Hospital we operated on a patient diag-

nosed perinephritic abscess, and encountered pus just outside the posterior renal fascia. Following this supuration upward, we encountered bare bone of a vertebra and called the lesion osteomyelitis of the eleventh dorsal vertebra. With drainage and prolonged rest on a Bradford frame, the patient recovered. It was before the days of the sulfonamides and penicillin.

DR. CHATTERTON, in closing: In answer to Dr. Regnier's question, a definite effort was made to hyperextend this man when plaster of Paris cast was applied to transfer the weight-bearing of his spine from the bodies to the posterior facets.

The difficult thing for me to decide was as to whether this man had a tuberculosis with a secondary infection or whether he had a true osteomyelitis. I do not believe it was tuberculosis because the x-ray pictures show early evidence of fusion without crushing down of the body of the vertebra, a change which would have taken years in the average tuberculous spine. I do not know as to the type of acute infection because the blood culture was negative, but penicillin I believe saved this man's life and was of great benefit to him when he had high temperature and was desperately ill.

CYSTECTOMY FOR CARCINOMA OF THE BLADDER

THEODORE SWEETSER, M.D.
Minneapolis, Minnesota

Dr. Theodore Sweetser, of Minneapolis, read his Inaugural Thesis on the above subject (See page 987). Lantern slides were shown.

Discussion

DR. W. F. BRAASCH, Rochester: Dr. Sweetser deserves much credit for the excellent discussion of his subject and for the good postoperative results he has had. Cystectomy, after all is said and done, is a pretty formidable procedure and I am sure that anyone would rather hesitate to submit himself to such an operation unless it was mandatory. Nevertheless, cystectomy with transplantation of the ureters undoubtedly offers the best method of radical removal of vesical carcinoma. It is true that many tumors of the bladder of the papillary type can be removed by transurethral electrocoagulation, and the results have been good in a high percentage of cases. However, there is always danger of leaving seeds of tumor tissue in other areas of the bladder wall, which become nuclei for recurrence of the tumor. Cystectomy removes the tumor completely, providing there is no perivesical extension.

The operation itself carries with it less danger as the years go on. The operative mortality should not be more than 10 to 15 per cent. However, the postoperative results in these cases have not been very reassuring, since the majority of such patients are dead at the end of two or three years. Cystectomy in the past has been done largely in cases in which the tumor is extensive and of the infiltrating type, and, even though evidence of perivesical extension of the growth cannot be found at operation, the prognosis is not good.

Cystectomy has been employed in recent years in early and more favorable cases and, as a result, the postoperative record should be much better than in the past. As far as transplanting the ureters to the skin is concerned, this operation is usually objected to because of the postoperative difficulty of caring for the ureters. Dilated ureters usually can be transplanted into the sigmoid as successfully as undilated ureters. The technique of the operation has been greatly improved in recent years. Dr. Priestley, in a recent report, stated that in the last

twenty cases he transplanted both ureters at the same time and, two or three weeks later, performed a cystectomy, with coincident removal of the prostate and seminal vesicles. Dr. Ferris recently performed a cystectomy on a patient, with bilateral ureteral transplantation, as well as prostatectomy and vesiculectomy, all in one operation. Three weeks later the patient walked over to the Clinic, apparently in good condition. With perfection of technique and with careful pre-operative and postoperative treatment, which is equally important, cystectomy has lost much of its formidable character and I am sure that it will be employed more often.

DR. C. D. CREEVY, University of Minnesota: I would like to congratulate Dr. Sweetser on the excellence of his presentation, and on the work that he has done in these patients. I have never been able to convince myself of the value of total cystectomy in infiltrating carcinoma of the bladder because of the great frequency of local recurrence. I believe that I am correct in stating that Dr. Nesbit at Ann Arbor and Dr. James Priestley at the Mayo Clinic, have abandoned the operation for infiltrating carcinoma for this same reason, and that they reserve it for recurring multiple papillomata or very low-grade tumors.

I have twice performed cutaneous ureterostomy for inoperable carcinoma of the bladder. One of the patients died postoperatively, and the other survived in misery.

I have done four uretero-intestinal transplantations for carcinoma of the bladder. In one instance the operation was palliative; and, while the transplantation was a success, the patient had enough sloughing and bleeding so that it was without value as far as comfort was concerned. A second patient died of pneumonia three weeks after operation; and the third and fourth patients survived cystectomy, but both had local recurrences in about six months.

In a fifth case, done jointly by Dr. Meland and myself, the patient survived, but it was found that he had a chronic ulcerative cystitis with extreme contraction of the bladder but without any neoplasm.

Another factor which restrains me from doing these operations in carcinoma of the bladder is the fact that no patient is likely to be completely comfortable for any great length of time after transplantation of the ureter into the bowel, although I am well aware of the fact that one patient, at least, has survived for forty-five years after transplantation of the ureter into the bowel for exstrophy of the bladder.

Nevertheless, I am interested to see the results of others in this situation.

The meeting adjourned.

J. A. LEPAK, M.D., Secretary

NINE KOREAN PHYSICIANS BEGIN YEAR OF TRAINING IN UNITED STATES

Nine physicians from Korea, recently welcomed to the United States by Major General Norman T. Kirk, The Surgeon General, and Brigadier General James S. Simmons, Chief of Preventive Medicine Service, have begun a year of study in the field of public health, sponsored by the International Health Institute of the Rockefeller Foundation.

Three of the physicians are attending Johns Hopkins University Medical School, three Harvard University Medical School, and three the University of Michigan Medical School.

The purpose of the year of training, General Kirk said, "is to lay the foundation for a self-sufficient medical service for the Korean nation. For more than thirty years the Japanese have dominated all medical and other scientific work in Korea as well as its national and local government affairs. No Korean has been allowed to serve in a position of responsibility in the nation or in his own community."



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In Memoriam

HORACE NEWHART

Dr. Horace Newhart, outstanding specialist in diseases of the eye, ear, nose and throat, and for years identified with public health activities in Minneapolis in preservation and conservation of hearing, passed away July 9, 1945, after a short illness.

Dr. Newhart was born in New Ulm, Minnesota, December 9, 1872. After attending local schools and Carleton College, he received his bachelor's degree at Dartmouth and his medical degree from the University of Michigan in 1898.

After a short time in practice near Albany, New York, he became established in general practice in Minneapolis in 1901. He then spent several years in Vienna in the study of eye, ear, nose and throat diseases, and then devoted himself to this specialty upon his return to Minneapolis.

Dr. Newhart has been on the faculty of the University of Minnesota Medical School since 1912 and was Director of the Division of Otolaryngology for several years preceding his retirement in 1941. His interest was particularly in otology, and for the past two decades he devoted much of his energy to the improvement of audiometers for testing hearing and the development of better hearing aids. For many years he was chairman of the committee of the American Academy of Ophthalmology and Otolaryngology on the conservation of hearing and was president of the Academy in 1925.

Dr. Newhart was a member of the Hennepin County Medical Society, the Minnesota State and American Medical Associations; the American Laryngological, Rhinological and Otological Society; the American Otological Society, of which he was president in 1939-40; the American College of Surgeons; the Minnesota Academy of Ophthalmology and Otolaryngology, and the Minnesota Academy of Medicine. He belonged to the Sigma Chi and Phi Rho Sigma fraternities and to the Lafayette, Minikahda and Campus Clubs.

Dr. Newhart is survived by his widow, Anne Hendrick Newhart; a son, Ellwood H. Newhart; a sister, Grace, and two grandchildren, Anne and Sally.

CLIFFORD I. OLIVER

Dr. Clifford I. Oliver of Graceville, Minnesota, well known as a surgeon and State Senator from the forty-eighth district, died March 27, 1945, at the age of sixty-eight.

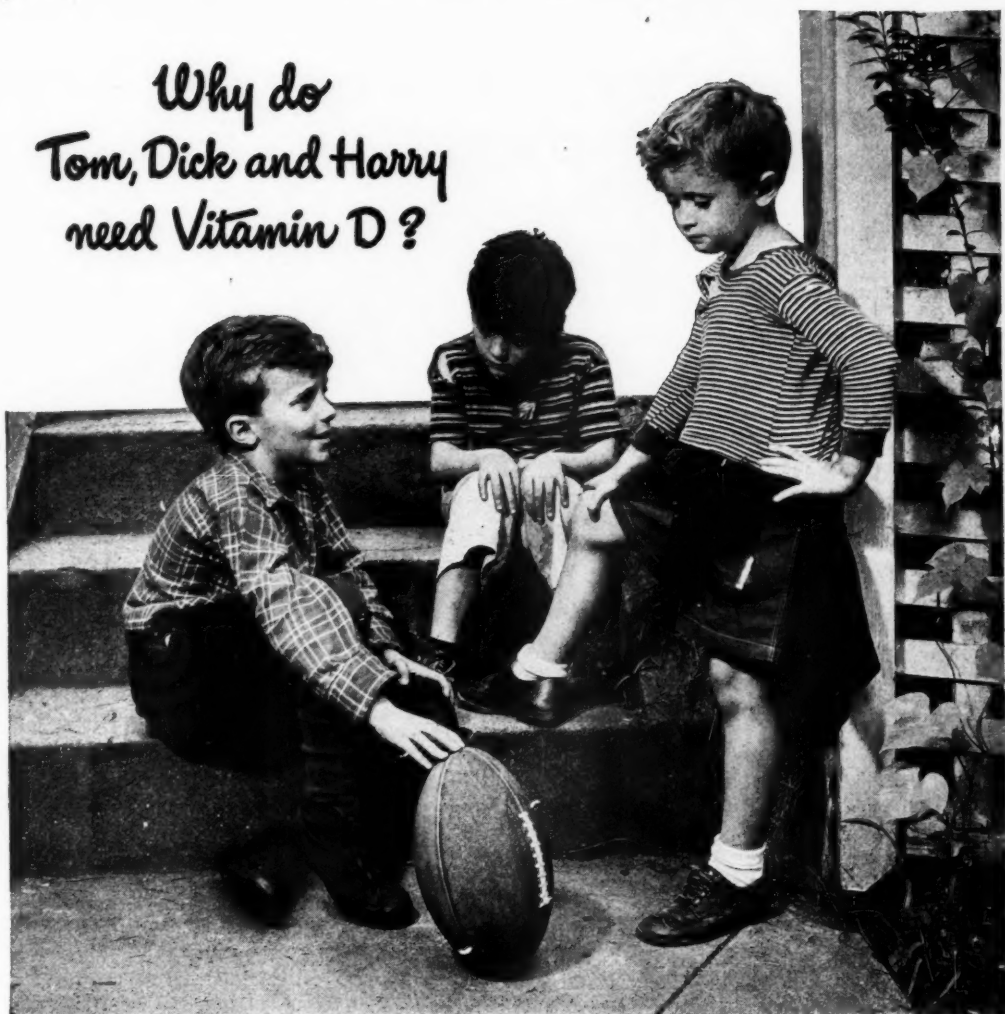
Dr. Oliver was born March 26, 1877, at Ames, Iowa. He attended local schools and took preliminary work at Cornell College. He graduated from the medical college of the University of Illinois in 1901.

Immediately following his marriage to Myrtle Gossard in June, 1901, Dr. Oliver went to Graceville. He was one of the charter members of the West Central Minnesota Medical Society. In 1904 he established a six-

(Continued on Page 1026)

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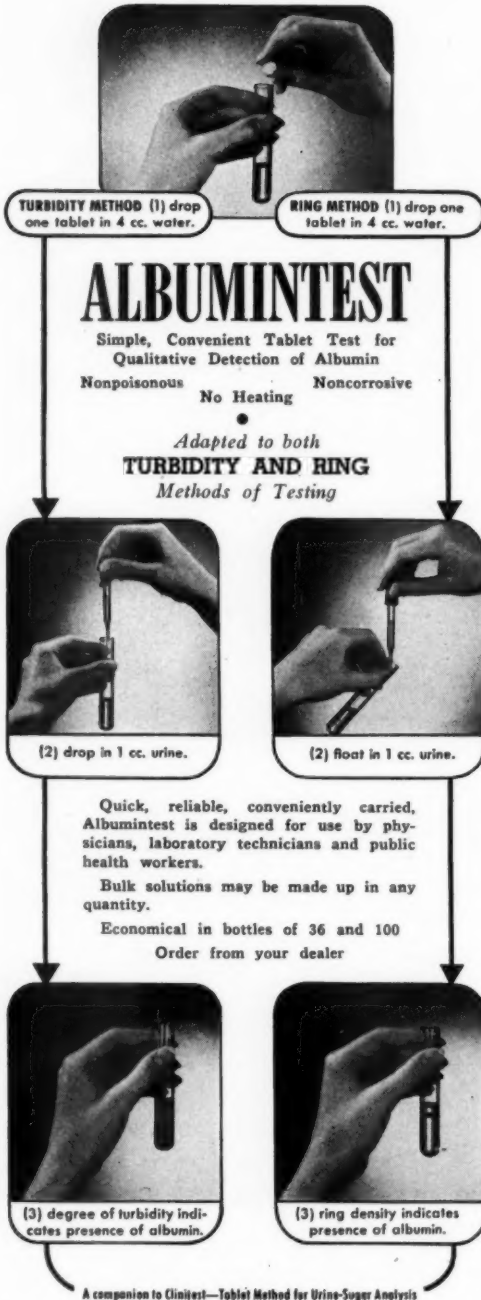
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CLIFFORD I. OLIVER

(Continued from Page 1024)



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bed hospital at Graceville, and in 1914 built the West Central Minnesota Hospital unit with twenty beds, which was doubled in capacity in 1925.

In 1915 Dr. Oliver became a member of the American College of Surgeons. In 1917 he enlisted as Captain in the Medical Corps of the Army and received his discharge in December, 1918. After taking some post-graduate work at the Mayo Clinic in 1918-19 he resumed practice at Graceville.

In 1934 he was elected to the State Senate from the forty-eighth district and served until 1941 when he declined re-election on account of poor health. He retired from active practice in 1937, but on the outbreak of war resumed practice when younger members of the clinic joined the service. He was actively engaged in practice till his death.

Dr. Oliver was particularly interested in early Minnesota history and Indian life in this territory. He accumulated a large and interesting collection of Indian relics and antiques, and had an extensive library on the subject. He also took a great interest in conservation of wildlife. He was a charter member of the Graceville Golf Club founded in 1923 and was an enthusiastic player until poor health prevented. Hunting and fishing also offered him diversion.

Dr. Oliver was a member of the West Central County Medical Society, the Minnesota State and American Medical Associations. He was local surgeon for the Great Northern and the Chicago, Milwaukee, St. Paul and Pacific Railways.

He is survived by his widow, a son, Dr. Irwin L. Oliver, who has been associated with him in practice since 1930, a daughter, Mrs. S. Buttz of Alexandria, and six grandchildren.

CARCINOMA OF THE BLADDER

(Continued from Page 992)

swers the challenge, and I do not believe that present-day radiation therapy is the answer.

5. The fatal weakness in any attempt at surgical removal of the more malignant infiltrating growths lies in our inability to remove the regional lymph nodes which are the primary filters of the escaping malignant cells.

Bibliography

1. Bugbee, H. G.: Surgery of genito-urinary malignant tumors. J.A.M.A., 112:298, (Jan. 28) 1939.
2. Conway, J. F., and Broders, A. C.: Submucous extension of squamous cell epithelioma of the urinary bladder. J. Urol. 47:461, (Apr.) 1942.
3. Geraghty, J. F.: Tumors of the bladder. In Cabot's Modern Urology—2nd Ed., 2:253, 1924.
4. Jewett, H. J.: A new method of ureteral transplantation for cancer of the bladder. J. Urol., 48:489, (Nov.) 1942.
5. Orr, L. M., Carson, R. B., and Novak, W. F.: Statistical study of present-day methods used in treatment of tumors of bladder. J. Urol., 42:778, (Nov.) 1939.
6. Priestly, J. T., and Strom, G. W.: Total cystectomy for carcinoma of the bladder. J. Urol., 50:210, (Aug.) 1943.

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REPORTS and ANNOUNCEMENTS

MEDICAL BROADCAST FOR DECEMBER

The following radio schedule of talks on medical and dental subjects by William O'Brien, M.D., Director of Postgraduate Medical Education, University of Minnesota, is sponsored by the Minnesota State Medical Association, the Minnesota State Dental Association, the Minnesota Hospital Association and the University of Minnesota School of the Air.

1	11:30 A.M.	KUOM-KROC-KFAM	Medicine in the News
5	11:00 A.M.	KUOM	A Keen Sense of Hearing Makes for Alertness
6	5:15 P.M.	WCCO	Nature of Diabetes
8	11:30 A.M.	KUOM-KROC-KFAM	Medicine in the News
12	11:00 A.M.	KUOM	Suitable Clothes Help Us to Forget Ourselves
13	5:15 P.M.	WCCO	Management of Diabetes
15	11:30 A.M.	KUOM-KROC-KFAM	Medicine in the News
19	11:00 A.M.	KUOM	Foods Serve 3 Main Purposes
20	5:15 P.M.	WCCO	Contribution of Medicine
22	11:30 A.M.	KUOM-KROC-KFAM	Medicine in the News
24	4:45 P.M.	WCCO	Your Hospital in Peace Time
26	11:00 A.M.	KUOM	Arranged
27	5:15 P.M.	WCCO	Dental Progress
29	11:30 A.M.	KUOM-KROC-KFAM	Medicine in the News

VAN METER PRIZE AWARD

The American Association for the Study of Goiter again offers the Van Meter Prize Award of three hundred dollars and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The award will be made at the annual meeting of the Association which will be held in Chicago, Illinois, in April or May, 1946, providing essays of sufficient merit are presented in competition.

The competing essays may cover either clinical or research investigations; should not exceed three thousand words in length; must be presented in English; and a typewritten double-spaced copy sent to the Corresponding Secretary, Dr. T. C. Davison, 207 Doctors Building, Atlanta 3, Georgia, not later than February 20, 1946.

A place will be reserved on the program of the annual meeting for presentation of the Prize Award Essay by the author if it is possible for him to attend. The essay will be published in the Annual Proceedings of the Association. This will not prevent its further publication, however, in any journal selected by the author.

CHICAGO MEDICAL SOCIETY CLINICAL CONFERENCE

The Chicago Medical Society Annual Clinical Conference will be held at the Palmer House, Chicago, March 5, 6, 7 and 8, 1946.

The program committee has invited outstanding members of the medical profession to present papers of gen-

(Continued on Page 1030)

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CHICAGO MEDICAL SOCIETY

(Continued from Page 1028)

eral interest to all the profession. The space in the Exhibition Hall has been completely allotted to a carefully selected group of Technical Exhibitors and the Committee on Scientific Exhibits is busy processing the large number of applications submitted for presentation at this meeting.

These plans assure the success of this, the first major general meeting in Chicago since the cessation of hostilities. It should prove intensely interesting to all physicians in and near Illinois.

NORTHERN MINNESOTA MEDICAL ASSOCIATION

The Northern Minnesota Medical Association held an all-day conference at Fergus Falls on November 3 and elected the following officers: president, Dr. George E. Sherwood, Kimball; vice president, Dr. Walter Scott Neff, Virginia; secretary-treasurer, Dr. Richard N. Jones, St. Cloud.

Special speakers included Dr. James T. Morrill, president of the University of Minnesota; Doctor William T. Peyton and Dr. Richard L. Varco, University Hospital, Minneapolis; Dr. H. L. Parker, formerly a professor at the University of Dublin; and Dr. Corrin Hodgson, of the Mayo Clinic.

Resolutions were adopted in appreciation of the excellent arrangements made by the Park Region District

and Otter Tail County Medical Societies for the meeting and complimentary luncheon at River Inn, and also for the evening banquet at which Dr. William L. Patterson, of the State Hospital, was host.

The next meeting will be held at Crookston.

CLARENCE M. JACKSON LECTURESHIP

The Clarence M. Jackson lectureship will be given January 9, 1946, at 8:15 P. M., in the Amphitheatre of the Museum of Natural History at the University of Minnesota.

The speaker is Dr. T. Duckett Jones, Associate Professor of Medicine at Harvard Medical School and Director of the Good Samaritan (Rheumatic Fever) Hospital at Boston. His subject will be "Rheumatic Fever."

The lecture is sponsored by Minnesota-Xi Chapter of Phi Beta Pi Medical Fraternity and is open to anyone who cares to attend.

WASHINGTON COUNTY

Washington County physicians met in regular monthly session, November 13, at Stillwater. The evening was devoted to the interpretation of forty-nine chest films of positive Mantoux reactors among the students at Stillwater schools. The interpretations were done by Dr. E. K. Geer of Saint Paul. Among guests present were Miss Madden, school nurse, and the Lake View Memorial Hospital technicians.



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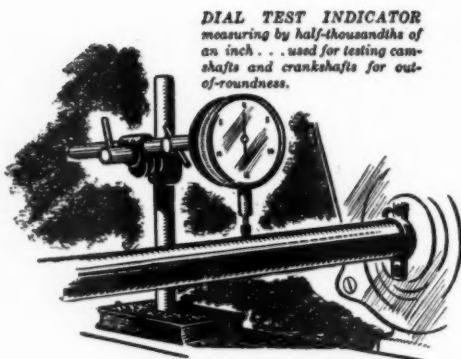
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BLUE EARTH COUNTY

Several members of the Blue Earth County are conducting Open Health meetings at which they provide trained speakers from the State Department of Health.

They will also have talks on Home Nursing, Cancer, and Volunteer Nurses' Aide. Some of those active in this project are Mrs. A. F. Kemp, Mrs. A. J. Wentworth, Mrs. George Penn, Mrs. G. A. Dahl, and Mrs. Roy Andrews.

EAST CENTRAL SOCIETY

The East Central Society recently met at the home of Mrs. E. W. Miller, Anoka, to make surgical dressings for the Minnesota Cancer Society. It was agreed to send a subscription to *Hygeia* to one school in each county of the East Central Society.

HENNEPIN COUNTY

Mrs. Clyde Undine was chairman of the committee which assisted the Hennepin County Tuberculosis Association in preparing Christmas seal letters this year.

Mrs. Frederick H. K. Schaaf was in charge of the sale of articles made by Glen Lake Sanatorium patients.

MOWER COUNTY

Mrs. H. B. Allen was hostess to the Auxiliary when work on their project of cancer dressings was done. Mrs. W. B. Grise of Austin is head of the Junior Red Cross.

NICOLLET-LE SUEUR

Mrs. L. E. Sjastrum, president, has just finished teaching a class in home nursing in North Mankato. Everyone is busy on a drive for *Hygeia* subscriptions. The Auxiliary has one new member, Mrs. A. A. Geroux of North Mankato.

RAMSEY COUNTY

Ramsey County members really get things accomplished at their meetings. Under the direction of Mrs. William Von der Weyer, they start their day at eleven o'clock, working on the project of making pads for Our Lady of Good Counsel Free Cancer Home and thumb bandages for St. John's Hospital. Lunch is served at 12:30 with a business meeting following at 2:00 o'clock. The members voted to continue their good work, as it serves a need in the community and helps the members to become better acquainted.

RENVILLE COUNTY

New officers elected are Mrs. R. E. Billings, Franklin; Mrs. Wm. Johnson, Morgan; Mrs. R. Adorns, Bird Island. The Auxiliary will again sponsor the annual radio contest for Tuberculosis and the *Hygeia* contest.

MINNESOTA MEDICINE

RICE COUNTY

Mrs. F. W. Stevenson of Faribault was hostess to her society in October. The following officers were elected: Mrs. F. W. Stevenson, Mrs. Norman Lende, and Mrs. A. M. Hanson, all of Faribault.

ST. LOUIS COUNTY

"Are you growing old gracefully?" was Dr. E. L. Tuohy's subject when he talked to the Auxiliary at the October luncheon meeting. Several new members were guests that day. A collection of current books for the Nopeming Sanatorium was made for the "up" patients' room.

STEARNS-BENTON

A pot-luck supper was held at the home of Mrs. Carl Luckemeyer in St. Cloud as the first meeting of the year. Mrs. Joseph B. Gaida, president, presided. The Auxiliary will conduct meetings in different homes each month, as a means of promoting better friendship.

STATE BOARD

The first State Board meeting of 1945-1946 was held at the Minnesota Club, Saint Paul, on November 8. Mrs. E. V. Goltz presided. Dr. Wallace Ritchie, guest speaker at the luncheon, talked on the Twenty-sixth General Hospital of which he was a member, and told some delightful anecdotes of his experiences.

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◆ Of General Interest ◆

Dr. Emery C. Bayley and Dr. Bernard A. Flesche have opened joint offices for the practice of medicine in the Wenzel Building at Lake City.

* * *

Dr. Albert I. Balmer, who recently returned to Pipestone from military service has re-established his practice in partnership with Dr. Charles A. Williams, with offices in the McKeown Building.

* * *

Dr. R. B. Kirklin, Mayo Clinic, has been made an honorary member of the Radiological Society of the Republic of Columbia and also of the Cuban Radiological Society.

* * *

Dr. Lewis A. Knutson, who was recently discharged from the Army Medical Corps, is now associated in practice with Drs. Gustave M. and John W. Helland at Spring Grove, Minnesota.

* * *

Dr. Clarence Siegel, formerly a member of the staff of the Glen Lake Sanatorium, has opened offices for the practice of internal medicine at 514 Lowry Medical Arts Building, Saint Paul.

* * *

Dr. A. R. Ellingson has completely recovered from his illness which required several weeks of recuperation at his cottage on Bad Medicine Lake, and has resumed his practice at Detroit Lakes.

* * *

Dr. Alfred K. Stratte has resumed his practice in Pine City. Until he can make other arrangements he will occupy his former office in the postoffice building, with consultation hours every day except on Fridays.

* * *

Dr. Joseph S. Emond has returned from military service and is again associated with his brother, Dr. Albert Emond, in the practice of medicine and surgery with offices in the Emond Hospital Building in Farmington.

* * *

Major Delmar R. Gillespie has returned to civilian life in Saint Paul, after twenty-two months of service with the 247th General Hospital in New Guinea and the Philippines. Dr. Gillespie is making his home at 1528 Grantham Street.

* * *

Dr. Hovald Helseth who, before going to Chicago for study at the Cook County Postgraduate School several months ago, and who was associated with the Thief River Falls Medical Clinic, has opened offices in the Woolworth Building at Fergus Falls for private practice.

* * *

Dr. L. S. Jordan, of Granite Falls, was elected president of the Minnesota Public Health Association at the annual meeting held at the Athletic Club in Saint Paul, succeeding Dr. F. E. Harrington, of Minneapolis. Dr.

J. A. Myers, of Minneapolis, is chairman of the Association's educational committee.

* * *

Announcement has been made of the appointment of Dr. O. W. Katz, of Aberdeen, South Dakota, as chief officer of the United States Veterans' Administration in Minneapolis.

Dr. and Mrs. Katz have taken an apartment in the Calhoun Beach Apartments.

* * *

Announcement has been made of the association of Dr. T. L. Trelstad with Dr. Baxter A. Smith in medical practice at Crosby. Dr. Trelstad, who was recently discharged from military service after over four years in the Pacific Theatre, is a native of St. Peter, but was practicing in Southern California prior to his induction.

* * *

Before restricting himself to regular office hours, Dr. H. A. Miller, who recently returned from Monroe, Georgia, to practice in Fairmont, spent some time in South Dakota where he did his part in reducing the pheasant population. While in Georgia, Dr. Miller was in charge of a hospital.

* * *

Dr. Byrl R. Kirklin, Mayo Clinic, was guest speaker at the open meeting of the Rochester Academy of Medicine held in commemoration of the 50th anniversary of the discovery of the x-ray. During the same week, Dr. Kirklin, representing the Surgeon General of the U. S. Army, attended the commemorative banquet held in Chicago.

* * *

Dr. Reuben C. Johnson, Minneapolis, was elected president of the Minnesota Society of Internal Medicine at their meeting for election of officers held in the Ramsey County Medical Society rooms in Saint Paul. Dr. Charles Watkins, of the Mayo Clinic, was made vice president, and Dr. Alex Brown, also of the Clinic, was re-elected secretary-treasurer.

* * *

Dr. Lyle V. Berghs, who has been doing "refresher work" at the Mayo Clinic since his discharge from the Armed Forces several weeks ago, has completed his courses and is again in practice in Owatonna after an absence of thirty-seven months. He is sharing offices with Dr. Donald H. Dewey, an association which began fifteen years ago.

* * *

Commander Horatio B. Sweetser, Jr., who has been in military service since December, 1941, has returned to his practice in Minneapolis. Commander Sweetser was Chief of Medicine at Great Lakes until October, 1943, when he was assigned to the same duties on the Hospital Ship *Samaritan*, where he remained until his discharge in October of this year.

(Continued on Page 1036)



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OF GENERAL INTEREST

(Continued from Page 1034)

After fifty-one months in the Army Medical Corps, Dr. Wallace E. Anderson has returned to Thief River Falls, where he is associated with Dr. Oscar F. Mellby, Mrs. Anderson's father.

During the past year Dr. Anderson was assistant chief of staff, with rank of Major, of a 750-bed hospital in the European theatre.

* * *

In the absence of Dr. Werner J. Lund from his offices in Staples for a much-needed vacation and rest, his practice has been in charge of Dr. John H. O'Leary, who was recently discharged from the Army Medical Corps. Dr. O'Leary, a former associate of Dr. Lund, was on duty for many months in the Aleutians and later in Europe.

* * *

Major Robert W. Schmidt, recently released from military service, has returned to his practice in Worthington. During thirty-nine months of duty Dr. Schmidt's assignments were mainly in the Pacific Theatre and the North Sector General Hospital. He served in the Hawaiian Islands, the Philippines, and in the Battle of Leyte.

* * *

Dr. J. Richards Aurelius, Saint Paul, was a member of the Advisory committee for the nationwide educational program conducted during the week of November 5 to 10 in observation of the fiftieth anniversary of the discov-

ery of the x-ray. The program was designed to familiarize the general public with the development of the ray as a medical instrument and results obtained from its use.

* * *

Dr. Stewart W. Shimonek has received his discharge from the Navy and has resumed the practice of orthopedics at 942 Lowry Medical Arts Building, Saint Paul. He attained the rank of Commander in the Navy and was assigned to the 4th Marine Division which saw action in the Marshalls, Saipan, Tinian, and Iwo Jima campaigns.

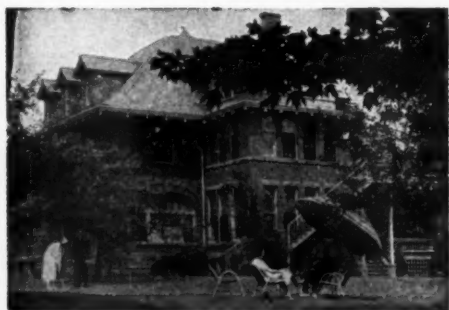
* * *

Lt. Victor Sbrov, Minneapolis physician, now in the Army Medical Corps, has been assigned to DeWitt General Hospital in Auburn, California. Lt. Sbrov graduated from the University of Minnesota in 1944.

A brother, Captain A. M. Sbrov, also of Minneapolis, recently returned to this country after nine months' service in the Army Medical Corps in Germany.

* * *

Dr. Edward L. Strem has opened an office at 711 Lowry Medical Arts Building, Saint Paul, for the practice of pediatrics. Dr. Strem interned at Ancker Hospital, Saint Paul, in 1938-39, was an instructor in anatomy and in pathology at the University of Minnesota Medical School in 1939-40, took a residency in pediatrics at the Minneapolis General Hospital in 1940-42, and was in the Medical Corps of the Army from July, 1942, until October, 1945.



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OF GENERAL INTEREST

Improvements which have been under way at the More Clinic in Eveleth for some time and now completed, include a new emergency room, laboratory, and library, and enlargement of the physiotherapy and diathermy rooms. New walls, celotex ceilings, plastic tile floors and fluorescent lighting have been installed.

The staff includes Drs. F. R. Kotchevar, Willard Akins, and M. L. Strathern.

* * *

Dr. Robert G. Hankerson is again in practice at Minnesota Lake, after an absence of three years in the armed forces. Dr. Hankerson enlisted in the Army Air Corps in August, 1942. He went overseas in September, 1943, and served as Flight Surgeon in the China-Burma-India theatre for fourteen months. He was awarded the Air Medal and his squadron the Presidential Citation.

* * *

Results of the balloting by mail for officers of the Ramsey County Medical Society were announced at a meeting of the society held at Ancker Hospital on November 26. Dr. Harry B. Zimmermann was elected president, succeeding Dr. Justus Ohage. Dr. John M. Culligan is president-elect for 1947; Dr. J. Richard Aurelius is vice president, and Dr. Clayton K. Williams, secretary-treasurer.

* * *

Dr. A. W. Shaw, confined in the Municipal Hospital in Virginia by an operation which involved amputation of the right leg, is reported at this time as progressing favorably.

A pioneer Mesabi Range physician and surgeon, Dr. Shaw was founder of the hospital at Buhl, where he served a lengthy term as director and chief surgeon. Since disposing of the hospital several years ago he had been in practice in Virginia, but recently retired.

* * *

Dr. E. L. Tuohy, president of the Minnesota State Medical Association, was the guest speaker at the joint meeting of the Lyon-Lincoln and Blue Earth County Medical Societies held at the Hotel Thomas in Worthington.

Dr. B. J. Branton, of Willmar, chairman of the Committee on Organization of the Minnesota Medical Care Plan, discussed the plan and the progress that has been made in getting it into operation.

* * *

Captain Peter S. Rudie, Duluth physician and surgeon, has been released from service in the Navy, where he has been on duty since the week following the attack on Pearl Harbor. At the time of his enlistment he was assigned to the U. S. Naval Hospital at Bremerton, Washington. From there he was transferred to the South Pacific where he served as Senior Medical Officer on the *USS Dixie*. For the past sixteen months he was Chief of Surgery in the U. S. Naval Hospital at Camp Lejeune, North Carolina.

* * *

Dr. Paul Bjelland has opened offices in the Thomas Building at Nicollet Avenue and 58th Street, Richfield, for the practice of medicine and surgery. Dr. Bjelland, who has been serving as medical officer for a local naval defense plant for most of the duration, was formerly as-

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sociated with the Minnesota Public Health Department in Duluth. He is a graduate of the University of Minnesota Medical School, and following the completion of his internship at Asbury Hospital in Minneapolis he did postgraduate work in surgery in Chicago.

* * *

Announcement of the election of Cleon Headley, Saint Paul attorney, as second vice president of the Minnesota Cancer Society has been made by Dr. William A. O'Brien, president. Mr. Headley will assist in the educational work which is conducted from the offices of the society in the Lowry Building in Saint Paul.

Edwin J. MacEwan, the new administrative director of the organization, assumed his duties on October 15. Mr. MacEwan was formerly executive vice president of the New Haven, Connecticut, Chamber of Commerce.

* * *

Dr. Orville H. Jones, formerly of Madison Lake, has opened offices in the National Citizens Bank at Mankato. About the same time, with his wife and four children, he moved into a new home recently purchased. Following his graduation from the University of Minnesota in 1938, Dr. Jones located at Madison Lake and also assisted Dr. J. A. Cosgriff at Olivia and Dr. D. E. Affeldt at Kasson. He is now a member of the staffs of St. Joseph's Hospital and Immanuel Hospital in Mankato.

* * *

With the nearest physician thirteen miles from Minneota, residents of the community sent a petition with 1,244 signatures to the War Department asking for the

release of Dr. S. D. Wolstan from military service, so that he might return to his practice at Minneota. The petition stated that the neighboring doctors at Marshall were already greatly overworked and with winter approaching, when the roads may be impassable for days at a stretch, a state of emergency could be said to exist.

* * *

Dr. Carl H. Winquist, recently released from the Army Medical Corps after four years of service, has resumed his practice in Crosby. Since his induction in February, 1941, Dr. Winquist has served at various bases in this country, and with the 7th Army in Europe from October, 1944 to June, 1945, where as Major he was in charge of a surgical team at the 132nd Evacuation Hospital. His unit supported the 7th Army from Marseille to Munich.

Dr. Benjamin A. Fine, who has been in charge of the practice during Dr. Winquist's absence, will remain as an associate in the office.

* * *

Dr. Henry A. Korda, who was assistant to Dr. Elward K. Endress in Saint Paul before his induction into the armed forces, where he served for thirty-eight months, has announced his association with Dr. L. A. Veranth for the practice of medicine and surgery in St. Cloud.

Dr. Korda, a captain in the Army Medical Corps, had sixteen months of service with combat units and was later stationed at the 95th Evacuation Hospital. He was

awarded the ETO ribbon with six battle stars and the Purple Heart for wounds suffered at Anzio, and the Arrowhead Decoration for D-Day landings.

A graduate of the University of Minnesota Medical School, he served his internship at Miller Hospital in Saint Paul.

* * *

Dr. Lloyd Gilman, who, at the time of his induction into military service was practicing in Atwater, has opened offices in Willmar, where he was born and attended high school.

A graduate of Macalester College and the University of Minnesota Medical School, Dr. Gilman was commissioned a reserve officer in 1937, and was called into service on May 6, 1937. He went overseas with the 6th Armored Group in January, 1944, and served in the European Theatre of Operations. His rank at retirement was Major.

* * *

While on a three months' terminal leave, Captain David M. Potek returned to International Falls to make arrangements for re-opening his offices and to find living quarters for his family who have been living in Saint Paul while he has been in service.

Captain Potek enlisted in the Army Medical Corps in November, 1940. In fifty-eight months of duty he was with the 118th General Hospital in Australia, Camp Ellis, Illinois, and various separation centers. He is a graduate of the University of Minnesota Medical School, Class of 1933.

* * *

Drs. Edwin G. Benjamin and Harold G. Benjamin, sons of Dr. Arthur E. Benjamin, have returned from military service and are now associated with their father in the practice of general surgery with offices at 1727 Medical Arts Building, Minneapolis. Dr. Edwin G. Benjamin, with the rank of Lieutenant Colonel, served as Commanding Officer of Midland Field Post Hospital in Texas, and as post surgeon at the army hospital at Gulfport, Mississippi. Dr. Harold G. Benjamin was chief surgeon of the 41st Field Hospital located at New Guinea, Biak, and on Luzon, and had the rank of Major.

* * *

After an absence from his missionary post in Nanking since 1941, when he was forced to flee with his family, Dr. J. Horton Daniels, who has been recently associated with the student's health service at the University of Minnesota, will return to China as soon as the State Department clears his passport.

Dr. Horton Daniels left Minneapolis for China in 1919 as a representative of the Presbyterian Church, and he is a member of the staff at the University of Nanking.

Mrs. Daniels, nee Helen Dunn, of Minneapolis, will not accompany her husband, as the State Department refuses clearance for women until conditions in China are more settled.

* * *

Dr. Richard B. Hullsiek has re-opened his office at 326 Lowry Medical Arts Building, Saint Paul, for the practice of urology. Dr. Hullsiek entered active service September 20, 1940, and for two and half years was Medical Director of the State Selective Service. He went overseas in November, 1943, as Chief Surgeon in

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a Station Hospital and was later Executive Officer of an Army Convalescent Hospital of 3,000 beds with the 3rd and 9th Armies in France, Holland and Germany. Dr. Hullsiek attained the rank of Lieutenant Colonel in the Medical Corps and will obtain his official discharge January 1, 1946.

* * *

Dr. James L. Jaeck, who was recently discharged from the Navy, has opened offices at Heron Lake.

A 1936 graduate of the University of Minnesota Medical School, Dr. Jaeck had been in practice in Minneapolis for five years at the time of his enlistment. During this period he was examining physician at Lymanhurst Hospital, was a member of the staff of the Swedish Hospital, and held a clinical assistantship at the University Medical School.

Dr. Jaeck was in active combat duty for forty-two months, twenty of which were in overseas service. He was stationed in Iceland for ten months prior to his commission as Lieutenant Commander and Flight Surgeon on the Aircraft Carrier *USS Princeton*. While in the Navy, Dr. Jaeck took advantage of an opportunity for specialized training in diseases of the eye, ear, nose and throat.

* * *

Alumni of the University of Minnesota will be interested in knowing that the University and the medical faculty have been especially commended by General Joseph T. McNarney, Commanding Officer, Headquarters Mediterranean Theater of Operations, United States Army, for the distinguished service performed by the 26th General Hospital.

Established near Constantine, this was the only general hospital of the Eastern Base Section. During the Tunisian Campaign it cared for large numbers of sick and wounded. "Later," the commendation states, "with the movement to Bari, Italy, the unit formed the nucleus of medical service to the Fifteenth Air Force and has been highly commended by that command."

"The high standard of professional service maintained by the hospital has reflected great credit on the medical officers and nurses as individuals; this credit may be properly shared by the University of Minnesota, their sponsor."

The commendation is coincident with the inactivation of the hospital.

* * *

Captain Thomas B. Magath, the first member of the Mayo Clinic to enlist in military service, has returned to his duties as head of the department of bacteriology and parasitology at the Clinic. He had completed four years and nine months of active duty in the Navy Medical Corps. During this time he made twelve trips to the Caribbean, South America and Central America; three trips in the Pacific, extending from the Aleutians to Southern Australia. He covered Africa, Southern Europe, Turkey, the Levant, the Middle East, India, Burma and China, and he has the highest praise for the work of the doctors, dentists, nurses and corpsmen under "the superb leadership and untiring efforts of Vice Admiral Ross T. McIntire."

In discussing the tremendous strides made by med-



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icine and surgery during the war and possible subsequent work in civilian life done by men who may not have the equipment they had in service, Captain Magath said that he does not expect any great lag in achievement because of the close liaison which has been kept and which will continue to be kept between the Reserve Command, the Army and Navy, and the Public Health Service.

Captain Magath's daughter, Ensign Elizabeth Magath, is an occupational therapist at the U. S. Naval Hospital in Seattle, and a son-in-law, Captain James T. McClellan, a former fellow at the Mayo Foundation, is in the Army Medical Corps and stationed at Marseilles.

* * *

The Hennepin County Medical Society has announced the return to practice from military service of the following Minneapolis physicians:

Dr. Charles A. Aling, a major in the Army Medical Corps, was inducted in November, 1942. He was sent overseas in February, 1944, and served as Chief of the Surgical Group for the 11th Evacuation Hospital in France, Luxembourg, Belgium, Holland, and Germany.

Dr. Samuel Balkin, plastic surgeon, was in service from September, 1941, and with rank of Major was plastic surgeon at Billings General Hospital at Fort Benjamin Harrison. He went overseas in April, 1943, where he was associated with the 94th Evacuation Hospital throughout the entire Italian Campaign.

Dr. Victor K. Funk, commander, entered service in April, 1942, and served as senior medical officer aboard the *USS Orion* in the Pacific for seventeen months. Dr. Funk has rejoined the staff at Glen Lake Sanatorium.

Dr. James A. Balke, general medical practice, has returned to his offices in Hopkins after an absence of three years in service. A captain, he was fifteen months at a replacement depot in the ETO.

Dr. Allan Challman, psychiatrist, before his entrance into the Army in June, 1941, was head of the Child Guidance Clinic of the Minneapolis public schools, but he is now in private practice. He was consultant in psychiatry for the South Pacific Command, headquarters in Australia for three years. His rank was Colonel and he holds the Legion of Merit Award.

Dr. Edward T. Evans, orthopedist, Lieutenant Colonel, had been in the Army since February, 1942. In Oc-

tober of the same year, he was made Chief of Orthopedics for Base Hospital 26 in North Africa and Italy. Later he filled the same position at Billings General Hospital, Fort Benjamin Harrison, Indiana.

Dr. Douglas P. Head, internal medicine, entered the Army in February, 1942, and with rank of Major served as internist at Base Hospital 26 in North Africa and Italy. He was awarded the Bronze Star for special research in peptic ulcers.

Dr. Emil Johnson, surgery, has been in service since August, 1942. He went overseas in April, 1944, with the 71st Evacuation Hospital in New Guinea and the Philippines. His rank was Captain.

HOSPITAL NEWS

Announcement has been made of the sale of the Mahnommen Hospital to the Catholic Sisters of Crookston. The hospital was founded by Anna B. Munson, but it was later sold to Dr. John J. Ederer, who operated it until two years ago, when he was forced by ill health to close it. Since then Mahnommen doctors have been obliged to send their patients out of town when hospitalization was required.

* * *

A heart disease medical research center at the University of Minnesota, which it is hoped will attract physicians, biochemists, physicists, and other scientists from all parts of the country, will be established in connection with the new heart hospital for which the solicitation of funds is now being conducted. The Variety Club of Minneapolis, an organization of theatrical men, has pledged itself to raise the required \$325,000 for the building and to contribute \$25,000 annually to its support.

The site of the new hospital is at the rear of the Univeristy Hospital and faces the Mississippi River. It will be connected to the main hospital by a tunnel and will use the same kitchen, heating and x-ray equipment.

* * *

Opening of the new Public Health Center in Minneapolis on October 26 was celebrated with open house from four to six. The guests included Hennepin County community leaders and representatives of the medical and nursing professions and health and welfare agencies.

The Hennepin County Tuberculosis Association was

OF GENERAL INTEREST

host, and Dr. Stephen H. Baxter, president of the association, and a member of the Board of Public Welfare for six years, was guest of honor.

* * *

Dr. Marland R. Williams, of Cannon Falls, has been appointed on the committee which is in charge of raising funds for the establishment of a memorial hospital in that city.

CLINICAL-PATHOLOGICAL CONFERENCE

(Continued from Page 1004)

Summary

Three cases of adrenal hemorrhage of the newborn in an experience of 9,500 births are described. One of these followed a typical clinical course with fever, rapid, jerky respirations, cyanosis, palpable mass in the right kidney area, negative x-ray studies of the lungs, and death within thirty-six hours after birth. The other two infants died very suddenly and unexpectedly during the first week of life. Vitamin K was used in the mother prophylactically in one of these cases.

The anatomical criterion for hemorrhage in the adrenal of the newborn is a minimum of a microscopic demonstration of a complete disruption of the regular irregularity of the degenerating columns of cortical cells and adjacent sinusoids by massed red blood cells.

A brief incomplete review of the literature concerning adrenal hemorrhage in the newborn is given.

References

1. American Academy of Pediatrics: Round-table discussion on hemorrhage of the newborn infant. *J. Pediat.*, 20:637-661, (May) 1942.
2. Arnold, D. P.: Massive suprarenal hemorrhage in newborn infant. *Am. J. Dis. Child.*, 40:1053-1057, (Nov.) 1930.
3. Clifford, S. H.: Hemorrhagic disease of the newborn. *J. Pediat.*, 14:333-340, (Mar.) 1939.
4. Firor, Warfield M.: Adrenal hemorrhage in children. *South. M. J.*, 30:306-309, (Mar.) 1937.
5. Goldzieher, Max A., and Gordon, Mary B.: The syndrome of adrenal hemorrhage in the newborn. *Endocrinology*, 16:165-180, (Mar.) 1942.
6. Goldzieher, M. A., and Greenwald, H. M.: Hemorrhage of suprarenals in newborn infant. *Am. J. Dis. Child.*, 36:324-332, (Aug.) 1928.
7. Hartman, Frank A.: Certain functions of the adrenal cortex. *New England J. Med.*, 209:480-486, (Sept. 7) 1933.
8. Henderson, J. S.: Hepatic hemorrhage in stillborn and newborn infants. *J. Obst. & Gynec. Brit. Emp.*, 3:377-388, (June) 1941.
9. Ikeda, Kano: Malignant meningococcal infection. *Minnesota Med.*, 28:373-378, (May) 1945.
10. Kelly, John F.: Hemorrhage of suprarenal glands following breech. *J. Indiana M. A.*, 24:135-136, (Mar. 15) 1931.
11. Levinson, S. A.: Suprarenal hemorrhages (traumatic) in the newborn. *Am. J. Surg.*, 29:94-96, (July) 1935.
12. Marine, D., and Vaumann, E. J.: Influence of glands of internal secretion of respiratory exchange. *Am. J. Physiol.*, 7:35, 1921; also 59:353, 1922.
13. Phillips, Sam: Hemorrhage and rupture of the adrenal in the newborn infant. *South. M. J.*, 31:759-761, (July) 1938.
14. Presentation of a case. Case records of Massachusetts General Hospital. *New England J. Med.*, 225:510-513, (Sept. 25) 1941.
15. Rosenblum, Jacob: Suprarenal hemorrhage in the newborn infant. *Am. J. Dis. Child.*, 43:663-666, (Mar.) 1932.
16. Schroder, C. H., and Wells, A. H.: Bilateral adrenal hemorrhages with Waterhouse-Friderichsen syndrome. *Minnesota Med.*, 27:486-487, (June) 1944.
17. Scott, W. J. M.: Influence of glands with internal secretion on respiratory exchange. *J. Exper. Med.*, 36:199, 1922.
18. Snedeker, L.: Hemorrhagic disease of the newborn. *J. Pediat.*, 19:1-15, (July) 1941.

MINNEAPOLIS SURGICAL SOCIETY

(Continued from Page 1019)

hospital in an attempt to build him up. (X-ray films before and after resection demonstrated.)

The second patient in whom operation was completed was made, aged 48, operated on in March, 1945, for a squamous cell carcinoma of the lower third of the esophagus which had produced dysphagia for five months. This tumor and the cardiac end of the stomach including three involved lymph nodes along the upper part of the lesser curvature were resected by a similar technique and a direct esophagogastrostomy made after bringing the stomach up into the chest. Convalescence again was uneventful and the patient relieved of dysphagia. He has, however, not regained all his lost weight so I fear he may have other metastatic lesions. The first x-ray film showed the obstructing tumor and second the thoracic stomach with a wide-open anastomosis.

Both of these patients on postoperative barium studies of the stomach have shown no delay at the site of the anastomosis but rather a marked hyperperistalsis throughout the stomach with considerable delay in passage of the meal through the pylorus. As the operative procedure necessitates the section of both vagus nerves perhaps these findings may be explained on the basis of unopposed action of the sympathetics. Dragstedt in his recent report on bilateral vagus section for ulcer does not record this as a result of the neurectomy.

The patients reported this evening represent only a beginning in the treatment of this otherwise fatal condition. None can be considered as a really early case of esophageal carcinoma. If good and permanent results are to be obtained they must result from surgical excision but even this will not avail unless the diagnosis can be made early and treatment instituted without delay. In closing, may I recommend that the abdominal surgeons give some thought to the transthoracic, transdiaphragmatic approach for some of their patients with high gastric carcinoma.

ERNEST R. ANDERSON, M.D.

Recorder

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BOOK REVIEWS

BOOK REVIEWS

Books listed here become the property of the Ramsey, Hennepin and St. Louis County Medical Libraries when reviewed. Members, however, are urged to write reviews of any or every recent book which may be of interest to physicians.

FIRST-AID TEXTBOOK—American Red Cross. Revised. Prepared for the instruction of first-aid classes. 254 pages. Illus. Price, 60c, paper cover; \$1.00, cloth. Philadelphia: The Blakiston Company, 1945.

THE PHYSICIAN'S BUSINESS. Practical and Economic Aspects of Medicine. Second Edition. George D. Wolf, M.D. Assistant Clinical Professor of Otolaryngology, New York Medical College, New York Fellow, New York Academy of Medicine Fellow, et cetera. 433 pages. Illus. Price, \$6.00, cloth. Philadelphia: J. B. Lippincott Co., 1945.

EVERYDAY PSYCHIATRY. John D. Campbell, M.D. Commander MC, USNR. Chief Neuropsychiatrist U.S. Naval Base Hospital No. 8; formerly Chief Neuropsychiatrist U. S. Naval Hospital, Charleston, S. C., and Visiting Lecturer in Psychiatry, Medical College of South Carolina; Diplomate, American Board of Neurology and Psychiatry. 333 pages. Price, \$6.00, cloth. Philadelphia: J. B. Lippincott Co., 1945.

MEN UNDER STRESS. Lt. Col. Ray R. Grinker, MC, and Major John P. Spiegel, MC, Army Air Forces. Pp. 484; no illustrations. Price \$5.00. Philadelphia: Blakiston, 1945.

From the experience of war comes this analysis of the reactions of a selected group of healthy, young, adult males when placed under stress of combat. No similar opportunity for such a study has ever existed, and it is fortunate that men of the stature of Dr. Grinker and Dr. Spiegel were on hand to record the observations. The material of the study included the flying personnel—pilots, navigators, bombardiers, and gunners; the stress was combat flying or preparation for it; the emotional reaction of the individual was fear or anxiety. This book is a study of the manner in which each personality handled these emotions. The war is over, but the man who suffers from "operational fatigue" may show the results of this stress for months and years to come.

This book is written less for the psychiatrist than for the general practitioner or specialist in other fields. Remarkably free from the jargon of psychiatry, the text carefully, though not obviously, defines an unfamiliar word or phrase. Just to learn the distinction between "fear" and "anxiety" is sufficient compensation for the

reading. Besides this, the book contains a readable analysis of the psychodynamics and offers usable therapeutic suggestions. The chapter correlating and transferring the findings of these anxiety neuroses of war with the needs of the civilian physician is especially useful.

"Men Under Stress" is simply written in delightful style, with complete bibliography and index. The type is large, the pages are of convenient size, and the paper is substantial but not glossy—all contributing to the pleasure of reading.

RODNEY F. KENDALL, M.D.

NEW AND NONOFFICIAL REMEDIES, 1945, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1945. Cloth. Price, postpaid, \$1.50. Pp. 760. Chicago: American Medical Association, 1945.

Each year a revised list of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association as of January first is published in book form under the title of "New and Nonofficial Remedies." The book contains the descriptions of acceptable proprietary substances and their preparations, proprietary mixtures if they have originality or other important qualities, important nonproprietary nonofficial articles, simple pharmaceutical preparations, and other articles which require retention in the book.

Some fifteen or twenty newly accepted preparations appear in the 1945 volume. A large number of preparations have been omitted, mainly brands of official preparations. The general statement concerning these pharmacopoeial preparations has been retained for the information of physicians.

As stated in the preface, the entire book has been scanned to bring it up to date with the latest medical knowledge. It is noted that the section "Articles and Brands Accepted by the Council But Not Described in N.N.R.," a vestigial remnant of which appeared in the 1944 volume, has now entirely disappeared.

This section appeared to have been a catch-all for brands of official articles the acceptance of which the manufacturers desired for reasons of prestige, and miscellaneous preparations which were not necessarily or importantly within the Council's scope and which did not require detailed description. Many of the official preparations have been transferred to the body of the book and the others deleted. One is struck by the large amount of medical information contained in this volume. Certainly no other compendium of comparable price contains so much.

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Index to Volume 28

A

- Abdominal aorta, Thrombosis and embolism of the, 807
- Abscess, Retropharyngeal, and massive hemorrhage, 644
- Abuse of prolonged rest in the aged, 803
- Accumulated experience of the Department of Pathology, University of Minnesota, neuropsychiatric material, The. II. Brain trauma, 449
- Acute appendicitis, 551
- Additional data on penicillin administration, 372
- Adenomyosis, endometriosis and cystomyoma, 589
- Administration of penicillin by the knee-joint method, 205
- Adrenal hemorrhage in the newborn, 1002
- Adson, A. W.: The surgical management of cerebral aneurysms (lantern slide demonstration), 592
- Age, Conflicts and psychogenic maladjustments incidental to, 715
- Aged, Abuse of prolonged rest in the, 803
- Aged surgical patients, Pre-operative and postoperative care of, 32
- Allergy, The more recent approaches to, 993
- American Public Health Association, A proposal of the—Local health service, 370
- Ampulla of Vater, Carcinoma of, 225
- Anemia, Pernicious, 818
- Aneurysms, cerebral, The surgical management of (lantern slide demonstration), 592
- Aorta, abdominal, Thrombosis and embolism of the, 807
- Aorta, Coarctation of the, 300
- Appendicitis, Acute, 551
- Argentaffin (or carcinoid), Multiple malignant, tumors of the small bowel with disseminated metastasis, 558
- Arthritis of the knee, Total excision of the patella for, 909
- Asthma and formation of hernia, 727
- Atresia, Congenital duodenal, 759
- Atresia, Congenital, of the biliary tract, 810

B

- Bad risk patient, Pre-operative and postoperative care of the, 34
- Bagley, E. C., and Bagley, W. R.: Stenosis of the sigmoid in the newborn, 455
- Bagley, W. R., and Bagley, E. C.: Stenosis of the sigmoid in the newborn, 455
- Bagley, Wm. R.: Additional data on penicillin administration, 372
- Bagley, William R.: Administration of penicillin by the knee-joint method, 205
- Barry, Lee W.: Adenomyosis, endometriosis and cystomyoma, 589
- Bayrd, Edwin D., and Prickman, Louis E.: Asthma and formation of hernia, 727

DECEMBER, 1945

- Bell, E. T.: Etiology of primary hypertension (lantern slide demonstration), 589
- Bell, E. T.: Tumors of the breast, 560
- Biliary tract, Congenital atresia of the, 810
- Bladder, Cystectomy for carcinoma of the, 987
- Bone marrow, The value of the sternal portion of the, in diagnosis, 669
- Bowel, small, Multiple malignant argentaffin (or carcinoid) tumors of the, with disseminated metastasis, 558
- Braasch, William F., and Mussey, Robert D.: Complications in the urinary tract during pregnancy, 543
- Brain trauma: The accumulated experience of the Department of Pathology, University of Minnesota, neuropsychiatric material, 449
- Bratrud, Arthur F.: Scalenus anticus syndrome, 65
- Breast, Tumors of the, 560
- Brief review of the present trends and needs of medical practice, 357
- Briggs, John Francis: Complications of pneumonia, 907
- Briggs, John Francis: Systemic sarcoidosis, 452
- Bronchi and the esophagus, Pathologic conditions in the, 897

Book Reviews

- American Medical Association: New and non-official remedies, 1043
- Bunnell, Sterling: Surgery of the hand, 330
- Everett, Houston S.: Gynecological and obstetrical urology, 253
- Fishbein, Morris: Medical uses of soap, 254
- Grinker, Lt. Col. Ray R.: Men under stress, 1043
- Judovich, Bernard, and Bates, William: Segmental neuralgia in painful syndromes, 602
- Kolmer, John A.: Penicillin therapy, 782
- Lull, C. B., and Hingson, R. B.: Control of pain in childbirth, 420
- McCormick, Charles O.: Pathology of labor, the puerperium and the newborn, 421
- MacBryde, Cyril M. (editor): Analysis and interpretation of symptoms, 331
- Strecker, E. A.: Fundamentals of psychiatry, 331
- Weiss, Samuel: Gall bladder and bile ducts, 332

C

- Camp, Walter E.: Classification and pathology of tumors of the retina, 317
- Carcinoma of ampulla of Vater, 225
- Carcinoma of the bladder, Cystectomy for, 987
- Carcinoma of the esophagus, 1018
- Carcinoma of the ileum, 396
- Carcinoma, Pulmonary metastasis of, diagnosed by bronchoscopy, 554
- Carey, James B.: Esophageal hiatus hernia, 327

1045

INDEX TO VOLUME 28

- Carley, Walter A.: The psychosomatic approach to certain dermatoses, 202
- Cerebral aneurysms, The surgical management of (lantern slide demonstration), 592
- Cesarean section, Placenta accreta in duplex uterus found at, 547
- Chatterton, Carl C.: Osteomyelitis of the lumbar vertebrae, 1020
- Chemotherapy, Observations on, 115
- Cholecystoduodenal fistula, 117
- Chronic peptic ulcer of the esophagus, 729
- Chronic subdural hematoma, 401
- Classification and pathology of tumors of the retina, 317
- Coarctation of the aorta, 300
- Colitis, chronic non-specific ulcerative, Surgery in relation to, 228
- Colonna reconstruction operation for ununited fractures of the neck of the femur, The, 641
- Common injuries associated with football at the University of Minnesota, 755
- Complications of pneumonia, 907
- Complications in the urinary tract during pregnancy, 543
- Conflicts and psychogenic maladjustments incidental to age, 715
- Congenital atresia of the biliary tract, 810
- Congenital duodenal atresia, 759
- Control of medical testimony—the Minnesota experiment, 111
- Country practice, The last twenty-five years in a, 815
- Coventry, W. A., and Wells, Arthur H.: Chronic peptic ulcer of the esophagus, 729
- Cranmer, Richard R.: Congenital duodenal atresia, 759
- Criteria of a satisfactory operation for ulcer and causes of failure after gastric resection for ulcer, The, 66
- Culligan, John M., and Snoddy, William T.: Sarcoid spleen (case report), 568
- Cystectomy for carcinoma of the bladder, 987
- Cystomyoma, Adenomyosis, endometriosis and, 589

Clinical-Pathological Conferences

- Adrenal hemorrhage in the newborn, 1002
- Case for diagnosis, A, (Coronary sclerosis with thrombosis; recent myocardial infarct with interventricular perforation; passive congestion of liver), 735
- Chronic peptic ulcer of the esophagus, 729
- Coarctation of the aorta, 300
- Congenital interauricular septal defect; hypertensive cardiovascular disease; chronic congestive heart failure, 299
- Diagnostic case report (Multiple myeloma; widespread mesodermal amyloidosis; severe cardiac amyloidosis; chronic congestive heart failure), 920
- Malignant meningococcal infection, 373
- Mesothelioma of the pleura, 209
- Parenteral fluid therapy, 564
- Pernicious anemia, 818
- Punch biopsy of the liver, 647
- Renal rickets, 458

1046

- Rh factor transfusion reaction and transfusion reaction instructions, 131
- Tumors of the breast, 560

Communications

- Cochrane, Byron B., 250
- Eckhardt, Carl L., 251
- Frykman, Howard, 154
- Hirschmann, V. R., 252
- Tudor, Robert C., 472
- Wiechman, Fred H., 606

D

- Deaths, Maternal, due to infection, 635
- Dennis, Clarence: Surgery in relation to chronic non-specific ulcerative colitis, 228
- Dermatoses, certain, The psychosomatic approach to, 202
- de Takats, Geza: Thromboembolism, 843
- Diagnostic centers—Postwar medicine in Minnesota, 284
- Diamond, J. F.: Thrombosis and embolism of the abdominal aorta, 807
- Diverticula of the jejunum, 395
- Duodenal atresia, Congenital, 759

E

- Eckman, Ralph J., and Wells, Arthur H.: Rh factor transfusion reactions and transfusion reaction instructions, 131
- Electro-shock therapy in a state hospital, 294
- Embolism, of the abdominal aorta, Thrombosis and, 807
- Emerson, Haven: Local health service—a proposal of the American Public Health Association, 370
- Endometriosis and cystomyoma, Adenomyosis, 589
- Epidermolysis bullosa in a newborn, 128
- Ericson, S.: The last twenty-five years in country practice, 815
- Esophageal hiatus hernia, 237
- Esophagus, Carcinoma of the, 1018
- Esophagus, Chronic peptic ulcer of the, 729
- Esophagus, Pathologic conditions in the bronchi and the, 897
- Essential thrombocytopenic purpura, 198
- Etiology of primary hypertension (lantern slide demonstration), 589

Editorial

- Another Pepper bill, 746
- Association of American Physicians and Surgeons, 141
- Benefits for veterans, 388
- Caffeine and peptic ulcer, 56
- Carbon tetrachloride, 389
- Chemotherapy of tuberculosis, 661
- Chiropractor bill in Massachusetts vetoed, 835
- Christmas seals, 937

MINNESOTA MEDICINE

INDEX TO VOLUME 28

"Combined" immunization against diphtheria, pertussis and tetanus, 468
 Compulsory health insurance in California, 218
 Department of National Health, A, 663
 Epidemic ringworm of the scalp, 217, 662
 Expansion of medical school postgraduate instruction, 141
 Gas gangrene, 387
 Hospital needs, 835
 Hospital needs in country districts, 1012
 Immune serum globulin and measles, 310
 Limitations of intravenous urography, 662
 Malpractice and the staff physician, 837
 Mayo Memorial at the University of Minnesota, The, 139
 Mayo Memorial campaign, 581
 Medical organization at Oak Ridge, Tennessee—site of the atomic bomb project, The, 936
 Methionine in toxic hepatitis, 933
 Migraine, 746
 More farsighted policy for medicine and other sciences, A, 581
 More nurses for the armed forces, 57
 Mortality trends in the last two decades, 934
 National Foundation for Infantile Paralysis, The, 56
 National Medical Society, 468
 New preparations of penicillin, 934
 New Wagner Bill analyzed, The, 309
 New Wagner Bill backed by President Truman, The, 1011
 Occupational diseases, 747
 Poliomyelitis, 218
 Postgraduate medical courses for physicians returning from service, 835
 Psychosomatic medicine, 139
 Responsibility of the private physician in tuberculosis control, 935
 Social Security Amendments of 1945, 582
 State House of Delegates—1945, 469
 State meeting cancelled, 217
 Studies in starvation, 747
 Three minor signs in physical diagnosis, 310
 Two proposed Minnesota Cancer Society projects, 833
 War's end, 745
 Whither bound, internist? 663

F

Fahr, George, and Schleicher, Emil Maro: The value of the sternal portion of the bone marrow in diagnosis, 669
 Farkas, John V.: Acute appendicitis, 551
 Fee, John J., and Tuohy, E. L.: Jaundice—a method of deciding where surgical treatment should supplement medical care, 981
 Femur, The Colonna reconstruction operation for ununited fractures of the neck of the, 641

Figi, Frederick A., and Hempstead, Bert E.: Malignant growths of the mastoid process and middle ear, 38
 Fistula, Cholecystoduodenal, 117
 Football, Common injuries associated with, at the University of Minnesota, 755
 Ford, Burton C.: Nursing in rural hospitals, 367
 Fractures, ununited, of the neck of the femur, The Colonna reconstruction operation for, 641
 French, Lyle A., Titrud, Leonard A., and Ritchie, Wallace P.: A summary of the neuro-surgical cases treated in a U. S. army general hospital, 914
 Fritzell, K. E.: Surgical practice in the Southwest Pacific, 473

G

Goldish, D. R., and Wells, Arthur H.: Diagnostic case report (multiple myeloma, widespread mesodermal amyloidosis, severe cardiac amyloidosis, chronic congestive heart failure), 923
 Green, Robert G., and Stavitsky, Abram B.: A survey of leptospirosis (Weil's disease) in Minnesota, 549
 Guthrie, W. G.: Reconditioning, 474

H

Hallberg, Olav E.: Spreading osteomyelitis of the maxilla, 126
 Hammes, E. M.: Chronic subdural hematoma, 401
 Hammes, E. M.: The control of medical testimony—the Minnesota experiment, 111
 Hammes, Ernest M.: The neuropsychiatric viewpoint of socialized medicine, 290
 Hanson, William A., and Hauser, George W.: Common injuries associated with football at the University of Minnesota, 755
 Hauser, George W., and Hanson, William A.: Common injuries associated with football at the University of Minnesota, 755
 Health service, Local—a proposal of the American Public Health Association, 370
 Hedberg, G. A.: The St. Louis County program of tuberculosis control, 122
 Hematoma, Chronic subdural, 401
 Hemorrhage, Adrenal, in the newborn, 1002
 Hemorrhage, Spontaneous subarachnoid, 286
 Hempstead, Bert E., and Figi, Frederick A.: Malignant growths of the mastoid process and middle ear, 38
 Henderson, Melvin S., and Hinchey, John J.: The Colonna reconstruction operation for ununited fractures of the neck of the femur, 641
 Hernia, Asthma and formation of, 727
 Hernia, Esophageal hiatus, 237
 Hernias, inguinal, Surgical repair of, 723
 Hertzog, Ambrose J.: Essential thrombocytopenic purpura, 198
 Hertzog, A. J., and Lober, Paul: A case for diagnosis (coronary sclerosis with thrombosis, recent myocardial infarct with interventricular perforation, passive congestion of liver), 733
 Hinchey, John J., and Henderson, Melvin S.: The Colonna reconstruction operation for ununited fractures of the neck of the femur, 641

INDEX TO VOLUME 28

- Hirschboeck, F. J., and Wells, Arthur H.: Case for diagnosis (congenital interauricular septal defect, hypertensive cardiovascular disease, chronic congestive heart failure), 297
- History of Medicine in Minnesota, 49, 134, 211, 304, 379, 462, 570, 651, 736, 823, 924, 1005
- Hochfilzer, John J.: Retropharyngeal abscess and massive hemorrhage, 644
- Hoffbauer, F. W.: Laboratory aids in the early recognition of liver disease, 903
- Holmes, Chester L., and Smith, Frederick L.: Varicose ulcers, 46
- Hypertension, primary, Etiology of (lantern slide demonstration), 589
- Petersen, Thorvald, 240
- Rathbun, Clarence Addison, 74
- Shrader, John Strickler, 937
- Sigerfoos, Charles Peter, 152
- Smith, Arthur Edward, 311, 1020
- Tiedemann, Elmer John, 76
- Ulrich, Mabel, 768
- Vaaler, Thorvald, 311
- Warnock, Ralph Wallace, 241
- Wanous, Ernest Z., 153
- Warren, Frank S., 394
- Ziegler, Lloyd H., 153

I

- Ikeda, Kano: Coarctation of the aorta, 300
- Ikeda, Kano, and Rosenthal, Robert: Malignant meningococcal infection, 373
- Ikeda, Kano, Schleicher, Emil M., and Sommers, Ben: Pernicious anemia, 818
- Ileum, Carcinoma of the, 396

In Memoriam

- Anderson, Earl M., 766
- Bates, Bret Vern, 766
- Blanchard, Henry Gustave, 508
- Bliss, J. Herbert, 937
- Bouman, Herman A. H., 588
- Brown, Edward I., 71
- Cabot, Hugh, 767
- Christensen, E. P., 71
- Cooney, Henry Clinton, 508
- Daugherty, Louis Eugene, 150, 401
- Davis, Herbert, 72, 401
- De Coster, William, 510
- Dodge, Warren Maynard, 588
- Dunlop, Alexander H., 394
- Ewing, C. Francis, 73
- Forbes, Robert S., 510
- Gosslee, Gilbert Leslie, 668
- Hoffman, Max, 235
- Hursh, Marion M., 238
- Ingram, Lawrence C., 767
- Kalinoff, Demeter, 856
- Kraft, Peter, 152
- Lee, John Leonard, 150
- Mattson, Carl Henning, 238
- Mayland, Lewis L., 766
- Meng, William L., 152
- Meland, Ernest L., 73
- Mingo, Francis Edmund, 74
- Newhart, Horace, 1024
- Oliver, Clifford I., 1024
- Pederson, Reuben M., 74

1048

J

- Jaundice—a method of deciding where surgical treatment should supplement medical care, 981
- Jejunum, Diverticula of the, 395
- Johnson, James A.: Diverticula of the jejunum, 395

K

- Kemp, M. W.: Conflicts and psychogenic maladjustments incidental to age, 715
- Kemp, M. W.: Electro-shock therapy in a state hospital, 294
- Kinsella, Thomas J.: Carcinoma of the esophagus, 1018
- Knee, arthritis of the, Total excision of the patella for, 909
- Kohlbray, Carl O., and Wells, Arthur H.: Adrenal hemorrhage in the newborn, 1002

L

- Laboratory aids in the early recognition of liver disease, 903
- Larson, L. W.: Responsibility of medicine, 195
- Last twenty-five years in a country practice, The, 815
- Laymon, Carl W.: Ringworm of the scalp, 363
- Lepak, J. A.: Brief review of the present trends and needs of medical practice, 357
- Leptospirosis (Weil's disease), A survey of, in Minnesota, 549
- Liver disease, Laboratory aids in the early recognition of, 903
- Liver, Punch biopsy of the, 647
- Lober, Paul, and Hertzog, A. J.: A case for diagnosis (coronary sclerosis with thrombosis, recent myocardial infarct with interventricular perforation, passive congestion of liver), 733
- Local health service—a proposal of the American Public Health Association, 370

Mc

- McDonald, John R., and Tinney, William S.: Pulmonary metastasis of carcinoma diagnosed by bronchoscopy, 554
- McNealy, Raymond W.: Pre-operative and postoperative care of the bad-risk patient, 34

MINNESOTA MEDICINE

INDEX TO VOLUME 28

M

- Malignant growths of the mastoid process and middle ear, 38
- Malignant meningococcic infection, 339
- Management of occipitoposterior positions, The, 999
- Manley, James R.: Placenta accreta in duplex uterus found at cesarean section, 437
- Manley, James R.: The management of occipitoposterior positions, 999
- Marrow, bone, The value of the sternal portion of, in diagnosis, 669
- Mastoid process and middle ear, Malignant growths of the, 38
- Maternal deaths due to infection, 635
- Maxeiner, Stanley R.: Carcinoma of ampulla of Vater, 225
- Maxilla, Spreading osteomyelitis of the, 126
- Medicine, Responsibility of, 195
- Meller, Robert L.: The accumulated experience of the Department of Pathology, University of Minnesota, neuropsychiatric material. II. Brain tumor, 449
- Meningococcic infection, Malignant, 373
- Mesothelioma of the pleura, 209
- Minty, E. W.: Cholecystoduodenal fistula, 117
- Minty, E. W., and Minty, F. W.: Surgical repair of inguinal hernias, 723
- More recent approaches to allergy, The, 993
- Mork, Byron O., Jr.: Postwar medicine in Minnesota—the doctor, 281
- Multiple malignant argentaffin (or carcinoid) tumors of the small bowel with disseminated metastasis, 558
- Mussey, Robert D., and Braasch, William F.: Complications in the urinary tract during pregnancy, 543

Medical Economics

- 300,000 beds eventual goal, 665
- AMA holds public relations conference, 938
- Consistent support of prepaid medical care seen, 939
- County officers discuss rural health problems, 312
- EMIC program accepted only as war emergency measure, 751
- EMIC program discussed again, 471
- Expanded maternal and child welfare program before Congress, 749
- Fortune* looks at medicine, 60
- Gift for refresher training received, 665
- Hill-Burton hospital construction bill, 314
- Kaiser's Permanente Foundation opens its doors to the public, 940
- "Little Mayo Clinics" Kaiser's vision, 752
- Medical care planning in high gear, 664
- Medical care thermometers show rising public interest, 391
- Medical Service Plan Corporation authorized, 470
- Minnesota's Enabling Act introduced, 221
- Minnesota has excellent record, 751
- Minnesota Veterans' Hospital at full capacity, 665
- DECEMBER, 1945

- Minnesota State Board of Medical Examiners, 61, 144, 224, 316, 394, 588, 666, 752, 841, 942, 1016
- Licentiates, August 29-31, 1944, 63
- Licentiates, November 10, 1944, 64
- Licentiates, February 16, 1945, 316
- Licentiates, May 19, 1945, 667
- Licentiates, July 13, 1945, 753
- New Wagner-Murray-Dingell Bill, 584
- North Central Conference meets in Saint Paul, 939
- North Central states discuss medical economic problems, 1013
- North Central states tackle insurance problems, 58
- Private health insurance underwriters active, 471
- Realism in public relations, 839
- Reconversion of 9-9-9 program, 1015
- Rhode Island cash benefit plan reported unsound, 143
- Rural health problems as farm leaders see them, 142
- Supreme Court voids medical board, 666
- "The Index" views medicine as big business, 940
- United Medical Service launches "all coverage" medical plan, 939
- Veterans' medical advisory committee proposed, 664
- Veteran rehabilitation program closely allied with civilian practitioner, 838
- Wisconsin and Iowa launch state medical care plans, 1014
- VA medical staff to aim at specialization, 1015

Miscellaneous

- Constructive program for medical care, American Medical Association, 674
- Navy doctors—and the types of duties to which they are assigned, 389
- Rigler, Leo G.—An appreciation, 219

N

- Nelson, Harvey: Carcinoma of the ileum, 396
- Neuropsychiatric material, The accumulated experience of the Department of Pathology, University of Minnesota. II. Brain trauma, 449
- Neuropsychiatric viewpoint of socialized medicine, The, 290
- Neurosurgical cases treated in a U. S. Army general hospital, A summary of the, 914
- Norman, J. F.: Abuse of prolonged rest in the aged, 803
- Nursing in rural hospitals, 367
- Nutting, R. E., and Wells, Arthur H.: Congenital atresia of the biliary tract, 810
- Nutting, R. E., and Wells, Arthur H.: Renal rickets, 458

O

- Observations on chemotherapy, 115
- Occipitoposterior positions, The management of, 999
- Osteomyelitis of the lumbar vertebrae, 1020
- Osteomyelitis of the maxilla, Spreading, 126

INDEX TO VOLUME 28

P

- Pacific, Southwest, Surgical practice in the, 473
 Parenteral fluid therapy, 564
 Patella, Total excision of the, for arthritis of the knee, 909
 Pathologic conditions in the bronchi and the esophagus, 897
 Penicillin, Administration of, by the knee joint method, 205
 Penicillin administration, Additional data on, 372
 Penicillin therapy, The present status of, 398
 Pernicious anemia, 818
 Phelps, Kenneth: Tumors of the trachea, 235
 Placenta accreta in duplex uterus found at cesarean section, 547
 Platou, Erling S.: Pre-operative and postoperative management of the poor-risk infant or child, 29
 Pleura, Mesothelioma of the, 209
 Pneumonia, Complications of, 907
 Pneumonia, Virus, 43
 Poor-risk infant or child, Pre-operative and postoperative management of the, 29
 Postwar medicine in Minnesota—diagnostic centers, 284
 Postwar medicine in Minnesota—the doctor, 281
 Pregnancy, Complications in the urinary tract during, 543
 Pre-operative and postoperative care of aged surgical patients, 32
 Pre-operative and postoperative management of the poor-risk infant or child, 29
 Pre-operative and postoperative care of the bad risk patient, 34
 Present status of penicillin therapy, The, 398
 Presidential message to the House of Delegates of the Minnesota State Medical Association, 629
 Prickman, Louis E., and Bayrd, Edwin D.: Asthma and formation of hernia, 727
 Psychogenic maladjustment, incidental to age, Conflict and, 715
 Psychosomatic approach to certain dermatoses, The, 202
 Psychosomatic medicine, 718
 Pulmonary metastasis of carcinoma diagnosed by bronchoscopy, 554
 Punch biopsy of the liver, 647
 Purpura, Essential thrombocytopenic, 198

Pediatric-Pathological Conference

- Epidermolysis bullosa in a newborn, 128
 Congenital anal stenosis, 207

President's Letter

- Annual meeting, The, 308
 Broadened medical education planning needed, 467
 Cogitations, 386
 Hershey conference on "Medicine and the Neuroses," The, 932
 (Without title), 55, 580, 660, 744, 832, 1010
 1050

- Postmeeting observations, 467
 Prepaid medical care, 216
 Spring to action! 138
 Trend of medical legislation, The, 308
 (Without title),

R

- Radl, Robert B.: Spontaneous subarachnoid hemorrhage, 286
 Reconditioning, 474
 Regan, Joseph M., and Young, H. Herman: Total excision of the patella for arthritis of the knee, 909
 Renal rickets, 458
 Responsibility of medicine, 195
 Rest, prolonged, Abuse of, in the aged, 803
 Retina, Classification and pathology of tumors of the, 317
 Retropharyngeal abscess and massive hemorrhage, 644
 Rh factor transfusion reaction and transfusion reaction instructions, 131
 Rickets, Renal, 458
 Riley, James: Mesothelioma of the pleura, 209
 Ringworm of the scalp, 363
 Ritchie, Wallace P., French, Lyle A., and Titrud, Leonard A.: A summary of the neurosurgical cases treated in a U. S. Army general hospital, 914
 Rosenthal, Robert, and Ikeda, Kano: Malignant meningococcal infection, 373
 Rural hospitals, Nursing in, 367

Reports and Announcements

- American College of Chest Physicians cancels meeting, 322
 American Congress of Physical Medicine, 601
 Chicago Medical Society Clinical Conference, Second Annual, 85
 Chicago Medical Society, 1028
 Clinical allergy course, 769
 Examinations of crippled children, 769
 House of Delegates, AMA, 408
 House of Delegates, MSMA, 408
 International College of Surgeons, 854
 Jackson, Clarence M., lectureship, 1030
 Johnston lecture on neurology, 421
 Judd, E. Starr, lecture, 242
 Medical Broadcast:
 January, 85; February, 156;
 March, 242; April, 322; May, 408; October, 854;
 November, 944; December, 1028
 Minneapolis Surgical Society:
 Meeting of October 5, 1944, 65
 Meeting of November 2, 1944, 225
 Meeting of December 7, 1944, 395
 Meeting of January 4, 1945, 473
 Meeting of March 1, 1945, 755
 Meeting of April 4, 1945, 843
 Meeting of May 3, 1945, 1018

INDEX TO VOLUME 28

Minnesota Academy of Medicine:

- Meeting of November 8, 1944, 145
- Meeting of December 13, 1944, 235
- Meeting of January 10, 1945, 317
- Meeting of February 14, 1945, 401
- Meeting of March 14, 1945, 589
- Meeting of April 11, 1945, 589
- Meeting of May 9, 1945, 669
- Meeting of October 10, 1945, 1020

Minnesota Society of Internal Medicine, 85, 944

Minnesota Society of Neurology and Psychiatry, 85

Minnesota State Medical Association:

- Roster, 475
- Summary of proceedings of House of Delegates, 850

National Conference on Medical Service, 85

Northern Minnesota Medical Association, 854, 1030

Omaha Midwest Clinical Society, 854

Postgraduate course in allergy (American College of Allergists), 854

Ramsey County Medical Society, 86

Red River Medical Society, 156

Refresher course, 156

St. Louis County Medical Society, 86

Second Lasker awards for fertility research and maternal care, 601

Upper Mississippi Medical Society, 86

Van Meter prize award, 1028

Wabasha County Medical Society, 944

Washington County Medical Society, 86, 242, 408, 854, 1030

West Central Minnesota Medical Society, 946

Woman's Auxiliary, 242, 322, 410, 504, 592, 948, 1032

S

St. Louis County program of tuberculosis control, The, 122

Sarcoid spleen (case report), 568

Sarcoidosis, Systemic, 452

Scalenus anticus syndrome, 65

Scalp, Ringworm of the, 363

Schleicher, Emil Maro, and Fahr, George: The value of the sternal portion of the bone marrow in diagnosis, 669

Schleicher, Emil M., Sommers, Ben, and Ikeda, Kano: Pernicious anemia, 818

Schmidt, Ruben F., and Wells, Arthur H.: Parenteral fluid therapy, 564

Schmidt, Ruben F., and Wells, Arthur H.: Punch biopsy of the liver, 647

Schroder, C. H., and Wells, A. H.: Epidermolysis bullosa in a newborn, 128

Schwartz, Virgil J.: Pathologic conditions in the bronchi and the esophagus, 897

Shannon, W. Ray: The more recent approaches to allergy, 993

Sigmoid, Stenosis of the, in the newborn, 455

Smith, Frederick L., and Holmes, Chester L.: Varicose ulcers, 46

DECEMBER, 1945

Snoddy, William T., and Culligan, John M.: Sarcoid spleen (case report), 568

Socialized medicine, The neuropsychiatric viewpoint of, 290

Sohlberg, Olof I.: Pre-operative and postoperative care of aged surgical patients, 32

Sommers, Ben, Schleicher, Emil M., and Ikeda, Kano: Pernicious anemia, 818

Spink, Wesley W.: Observations on chemotherapy, 115

Spink, Wesley W.: The present status of penicillin therapy, 398

Spleen, Sarcoid (case report), 568

Spontaneous subarachnoid hemorrhage, 286

Spreading osteomyelitis of the maxilla, 126

Stavitsky, Abram B., and Green, Robert G.: A survey of leptospirosis (Weil's disease) in Minnesota, 549

Stenosis of the sigmoid in the newborn, 455

Stewart, Rolla I.: Sudeck's disease, 761

Sudeck's disease, 761

Summary of the neurosurgical cases treated in a U. S. Army general hospital, A, 914

Surgeon and the ulcer problem, The, 145

Surgery in relation to chronic non-specific ulcerative colitis, 228

Surgical management of cerebral aneurysms, the (lateral slide demonstration), 592

Surgical patients, aged, Pre-operative and postoperative care of, 32

Surgical practice in the Southwest Pacific, 473

Surgical repair of inguinal hernias, 723

Survey of leptospirosis (Weil's disease) in Minnesota, A, 549

Sweetser, Theodore H.: Cystectomy for carcinoma of the bladder, 987

Systemic sarcoidosis, 452

T

Testimony, medical, The control of—The Minnesota experiment, 111

Thromboembolism, 843

Thrombosis and embolism of the abdominal aorta, 807

Tinney, William S., and McDonald, John R.: Pulmonary metastasis of carcinoma diagnosed by bronchoscopy, 554

Titrud, Leonard A., Ritchie, Wallace P., and French, Lyle A.: A summary of the neurosurgical cases treated in a U. S. Army general hospital, 914

Total excision of the patella for arthritis of the knee, 909

Trachea, Tumors of the, 235

Trends, present, and needs of medical practice, Brief review of the, 357

Troxell, M. A.: Psychosomatic medicine, 718

Tuberculosis control, The St. Louis County program of, 122

Tumors of the breast, 560

Tumors, Multiple malignant argentaffin (or carcinoid), of the small bowel with disseminated metastasis, 558

Tumors of the retina, Classification and pathology of, 317

INDEX TO VOLUME 28

Tumors of the trachea, 235

Tuohy, Edward L.: Presidential message to the House of Delegates of the Minnesota State Medical Association, 629

Tuohy, E. L., and Fee, John J.: Jaundice—a method of deciding where surgical treatment should supplement medical care, 981

U

Ulcer, Chronic peptic, of the esophagus, 729

Ulcer problem, The surgeon and the, 145

Ulcer, The criteria of a satisfactory operation for, and causes of failure after gastric resection for ulcer, 66

Ulcers, Varicose, 46

Urinary tract, Complications in the, during pregnancy, 543

Uterus, duplex, Placenta accreta in, found at cesarean section, 547

V

Value of the sternal portion of the bone marrow in diagnosis, The, 669

Varicose ulcers, 46

Vertebrae, lumbar, Osteomyelitis of the, 1020

Virus pneumonia, 43

W

Wangensteen, Owen H.: The criteria of a satisfactory operation for ulcer and causes of failure after gastric resection for ulcer, 66

Wangensteen, Owen H.: The surgeon and the ulcer problem, 145

Watz, C. E.: Multiple malignant argentaffin (or carcinoid) tumors of the small bowel with disseminated metastasis, 558

Wells, Arthur H., and Coventry, W. A.: Chronic peptic ulcer of the esophagus, 729

Wells, Arthur H., and Eckman, Ralph J.: Rh factor transfusion reaction and transfusion reaction instructions, 131

Wells, Arthur H., and Goldish, D. R.: Diagnostic case report (multiple myeloma, widespread mesodermal amyloidosis, severe cardiac amyloidosis, chronic congestive heart failure), 923

Wells, Arthur H., and Hirschboeck, F. J.: Case for diagnosis (congenital interauricular septal defect, hypertensive cardiovascular disease, chronic congestive heart failure), 297

Wells, Arthur H., and Kohlbry, Carl O.: Adrenal hemorrhage in the newborn, 1002

Wells, Arthur H., and Nutting, R. E.: Congenital atresia of the biliary tract, 810

Wells, Arthur H., and Nutting, R. E.: Renal rickets, 458

Wells, Arthur H., and Schmidt, Ruben F.: Parenteral fluid therapy, 564

Wells, Arthur H., and Schmidt, Ruben F.: Punch biopsy of the liver, 647

Wells, A. H., and Schroder, C. H.: Epidermolysis bullosa in a newborn, 128

Wolff, Herman J.: Virus pneumonia, 43

Y

Young, H. Herman, and Regan, Joseph M.: Total excision of the patella for arthritis of the knee, 909

Z

Zachman, A. H.: Postwar medicine in Minnesota—diagnostic centers, 284

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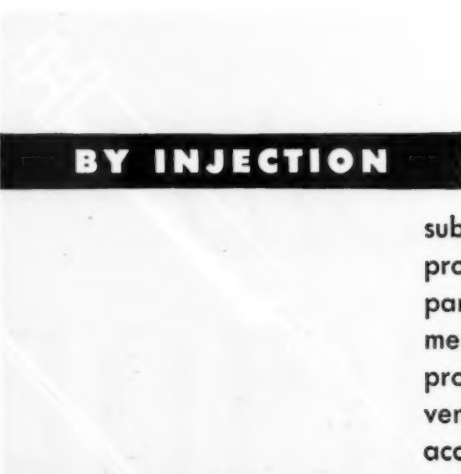


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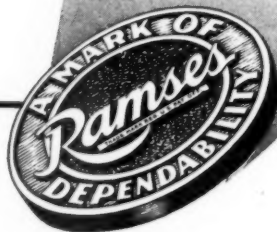
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